

DECISION DOCUMENT

Former Sunbelt Equipment
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224207
July 2015



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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Sunbelt Equipment
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224207
July 2015

Statement of Purpose and Basis

This document presents the remedy for the Former Sunbelt Equipment 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 Former Sunbelt Equipment 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. Excavation

All on-site soils which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. Approximately 50,000 cubic yards of soil will be removed from the site. Excavation will encompass the entire site to a depth of 15 feet. The soil remedy is expected to address the identified groundwater contamination through source removal and excavation dewatering. As part of this excavation, any on-site underground storage tanks, piping and associated contaminated soils will be removed and disposed of in accordance with NYSDEC guidance. Sampling will be conducted in accordance with DER-10 to document that any soil above bedrock left on-site meets the unrestricted SCOs.

On-site soil which does not exceed unrestricted use SCOs may be reused on the site to backfill the excavation to the extent that a sufficient volume of on-site soil is available and establish the designed grades at the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) may be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

3. Local Institutional Controls

If no Environmental Easement or Site Management Plan 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. If a sub-grade parking garage is constructed beneath the entire future on-site building, then the soil vapor remedial action objectives will be achieved through compliance with the New York City Mechanical Code, which requires proper ventilation.

4. 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.

5. Contingent 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 has not been completed prior to completion of the Final Engineering Report, then an SMP and EE will be required to address the SVI evaluation and implement actions, as needed; if a mitigation action is needed, a Track 1 cleanup can only be achieved if the mitigation system can be shut down within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, including the achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required and the remedy will achieve a Track 2 restricted residential cleanup.

Contingent Remedial Elements:

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 2 restricted residential cleanup at a minimum and will include an environmental easement and site management plan as described below.

A. Institutional Control

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

- a. 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);
- b. 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;
- c. 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
- d. require compliance with the Department approved Site Management Plan.

B. 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 the contingent institutional control section above.

This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use ;
- provisions for the management and inspection of the identified engineering controls;
- provision for the evaluation of the potential for soil vapor intrusion for future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

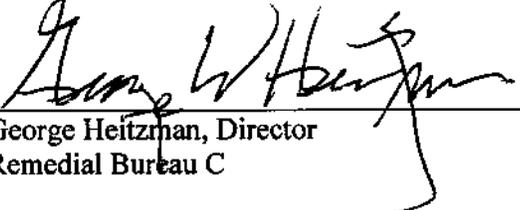
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy, including the potential effects of construction dewatering on adjacent properties
- a schedule of monitoring and frequency of submittals to the Department
- monitoring for vapor intrusion for any occupied existing or future buildings developed 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.

July 28, 2015
Date


George Heitzman, Director
Remedial Bureau C

DECISION DOCUMENT

Former Sunbelt Equipment
Brooklyn, Kings County
Site No. C224207
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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 repository:

Brooklyn Public Library - Greenpoint Branch
107 Norman Ave.
Brooklyn, NY 11222
Phone:

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 Former Sunbelt Equipment site is located in an urban area in the Williamsburg section of Brooklyn, Kings County. The site is bounded by Wythe Avenue to the east, N 13th Street to the north, Kent Avenue to the west, and N 12th Street to the south.

Site Features: The site comprises the full block. The property formerly included two groups of interconnected structures which have been razed. The perimeter of the site is enclosed with 10-ft. tall chain-link, corrugated metal and/or plywood fencing. Concrete block walls, 2-3 feet tall, border portions of the north, east and west property boundaries and are topped by the aforementioned fencing.

Current Zoning/Use: The site is currently zoned M1-2 which are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts include light industrial uses although offices, hotels and most retail uses are also permitted. The property is currently vacant. Surrounding land uses are primarily industrial including a former MGP site and an abandoned major oil storage facility (MOSF); however, both of these sites are slated for redevelopment as parks.

Past Use(s) of the Site: Beginning in roughly 1867, the site was part of a large, multi-block petroleum refinery known as the Pratt works. Sanborn fire insurance maps dated 1887 and 1916 show numerous storage tanks related to the Pratt Works, and to paint manufacturing facilities. Subsequent land uses include manufacturing, lumber storage, and a scrap metal yard. Most recently, the property was used for storage and maintenance of heavy construction equipment.

Multiple spills have been reported related to petroleum free product observed at the water table near the intersection of Kent Ave and N. 13th St. and in association with underground storage tank (UST) removals. A total of 11 USTs were removed or closed in place and excavation and removal of petroleum contaminated soil was conducted near the northwest corner and at the center of the site. An approximate total of 85 tons of contaminated soil has been excavated and disposed of off-site.

Site Geology and Hydrogeology: Regional maps show bedrock as an igneous intrusive known as the Ravenswood granodiorite of middle Ordovician to middle Cambrian age. Soil borings on the site have not encountered bedrock and it is presumed to be in excess of 70 feet below ground surface.

Unconsolidated sediments overlie the bedrock and consist of Pleistocene aged sand, gravel and silty clays, deposited by glacial-fluvial activity. Non-native fill materials consisting of dredge spoils, rubble and/or other materials have historically been used to reinforce and extend shoreline

areas and to raise and improve the drainage of low lying areas.

Soil at the site is described as historic fill material to a depth of approximately 8 to 12 feet below the surface underlain by native brown fine sand with silt and some clay. Groundwater at the site is present under water table conditions at a depth of approximately 5 to 12 feet below grade. Local flow on site appears to be to the southeast; however, it is highly likely that overall flow is westward towards the East River.

A site location map is attached as Figure 1.

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 (which allows for commercial use and industrial 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:

benzene, toluene, ethylbenzene and xylenes (BTEX)	lead
polycyclic aromatic hydrocarbons (PAHS), total	trichloroethene (TCE)
arsenic	1,1,1-trichloroethane
	tetrachloroethene (PCE)

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

- groundwater
- soil

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 this 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.

Sampling data indicate that soil, groundwater and soil vapor have been impacted by on-site and/or off-site contamination. The primary contaminants of concern include metals, VOCs and SVOCs.

Soil: Soils contain metals above unrestricted and/or restricted use SCOs including high concentrations of arsenic and lead. Lead concentrations are particularly high in the western portion of the site where concentrations of lead range from 397 to 9,350 parts per million (ppm).

Soils throughout the site contain VOCs above unrestricted use SCOs. Visibly petroleum-contaminated soils have been found in several areas near locations where underground storage tanks were once located. SVOCs including benzo(a)anthracene, benzo(a)pyrene and benzo(b)fluoranthene above unrestricted and restricted use SCOs. Benzo(a)pyrene concentrations range from 1 to 13.6 ppm. Site contamination extends to depths of approximately 15 feet. Deeper soils appear to be unimpacted.

The same contaminants have been found on neighboring properties. However, given the extensive history of industrial development in the area, the off-site contamination appears to have originated from off-site sources.

Groundwater: Groundwater on the site exceeds standards for VOCs. Most notable is benzene at concentrations up to 3,300 parts per billion (ppb). SVOCs include naphthalene at concentrations up to 600 ppb. Both the VOCs and SVOCs appear to be derived from former petroleum tank locations.

Soil Vapor: TCE (ND-16.2 ug/m³) PCE (ND-245 ug/m³) and TCA (ND-284 ug/m³) were detected in soil vapor samples collected from the site. These COCs have not been identified in soil or groundwater samples collected at the site and therefore no on-site source has been identified.

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*.

Since the site is fenced and covered with asphalt, concrete or building foundations, people will not come in contact with contaminated soils unless they dig below the surface materials. 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 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. Environmental sampling has indicated that soil vapor at the site is contaminated as a result of an off-site source. Because the site is vacant, the inhalation of contaminants due to soil vapor intrusion does not represent a current concern. The potential exists for the inhalation of contaminants due to soil vapor intrusion from an off-site source for any future onsite redevelopment and occupancy. Sampling indicates that site-related contaminants do not represent a concern for soil vapor intrusion off-site.

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.
- Prevent the discharge of contaminants to surface water.

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.

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 1: Unrestricted use remedy.

The selected remedy is referred to as the excavation of all soils above bedrock to unrestricted use criteria remedy.

The elements of the selected remedy, as shown in Figure 2, 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;
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- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

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soil remedy is expected to address the identified groundwater contamination through source removal and excavation dewatering. As part of this excavation, any on-site underground storage tanks, piping and associated contaminated soils will be removed and disposed of in accordance with NYSDEC guidance. Sampling will be conducted in accordance with DER-10 to document that any soil above bedrock left on-site meets the unrestricted SCOs.

On-site soil which does not exceed unrestricted use SCOs may be reused on the site to backfill the excavation to the extent that a sufficient volume of on-site soil is available and establish the designed grades at the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) may be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

3. Local Institutional Controls

If no Environmental Easement or Site Management Plan 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. If a sub-grade parking garage is constructed beneath the entire future on-site building, then the soil vapor remedial action objectives will be achieved through compliance with the New York City Mechanical Code, which requires proper ventilation.

4. 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.

5. Contingent 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 has not been completed prior to completion of the Final Engineering Report, then an SMP and EE will be required to address the SVI evaluation and implement actions, as needed; if a mitigation action is needed, a Track 1 cleanup can only be achieved if the mitigation system can be shut down within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, including the achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required and the remedy will achieve a Track 2 restricted residential cleanup.

Contingent Remedial Elements:

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 2

restricted residential cleanup at a minimum and will include an environmental easement and site management plan as described below.

A. Institutional Control

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

- a. 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);
- b. 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;
- c. 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
- d. require compliance with the Department approved Site Management Plan.

B. 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 the contingent institutional control section above.

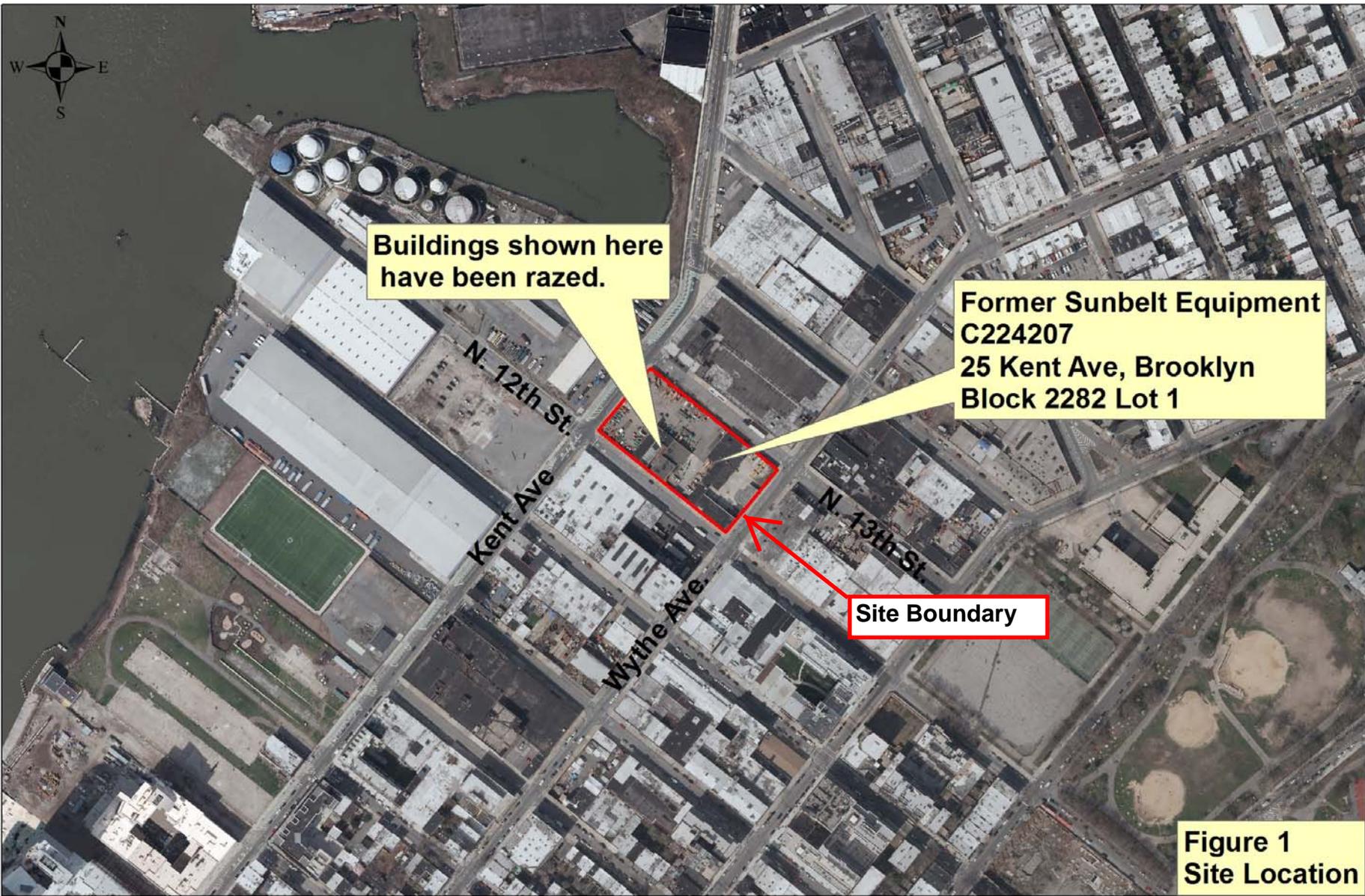
This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use ;
- provisions for the management and inspection of the identified engineering controls;
- provision for the evaluation of the potential for soil vapor intrusion for future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- 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 groundwater to assess the performance and effectiveness of the remedy, including the potential effects of construction dewatering on adjacent properties
- a schedule of monitoring and frequency of submittals to the Department

- monitoring for vapor intrusion for any occupied existing or future buildings developed on the site, as may be required by the Institutional and Engineering control Plan discussed above.



Buildings shown here have been razed.

Former Sunbelt Equipment
C224207
25 Kent Ave, Brooklyn
Block 2282 Lot 1

Site Boundary

Figure 1
Site Location

