

# DECISION DOCUMENT

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Former Carter Spray Finishing Corp.  
Brownfield Cleanup Program  
Brooklyn, Kings County  
Site No. C224218  
October 2022



**Department of  
Environmental  
Conservation**

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

# DECLARATION STATEMENT - DECISION DOCUMENT

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Former Carter Spray Finishing Corp.  
Brownfield Cleanup Program  
Brooklyn, Kings County  
Site No. C224218  
October 2022

## **Statement of Purpose and Basis**

This document presents the remedy for the Former Carter Spray Finishing Corp. 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 Carter Spray Finishing Corp. 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:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- any encountered underground storage tanks (USTs), or other underground structures associated with a source of contamination, and
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards.

Excavation and off-site disposal of all on-site soils which exceed the unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 unrestricted cleanup is achieved, a Cover System will not be a required element of the remedy. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/documentation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify DEC, submit the sample results and, in consultation with DEC, determine if further remedial excavation is necessary. Further excavation for development, if needed, will proceed after confirmation samples demonstrate that the SCOs for the site have been achieved.

Approximately 7,600 cubic yards of contaminated soil will be removed from the site to a depth of 20 feet below ground surface.

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

3. Groundwater Extraction & Treatment:

Groundwater extraction and treatment will be implemented as part of site-wide dewatering activities to facilitate soil removal below the water table. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to intercept contaminated groundwater to stop further migration. The extraction system will create a depression of the water table so that contaminated groundwater is directed toward the on-site extraction wells. The extracted groundwater will be treated according to permit requirements of the NYC Department of Environmental Protection before being discharged to the sewer system.

4. In-Situ Chemical Reduction:

An in-situ chemical reduction (ISCR) will be implemented to treat contaminants in groundwater remaining following cessation of dewatering. A chemical reducing reagent will be amended into selected areas at the bottom of the soil excavation. Monitoring will be conducted for VOCs upgradient and downgradient of the treatment zone.

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.

6. Local Institutional Controls:

If no environmental easement (EE) or site management plan (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.

Contingent Track 1

The intent of the remedy is to achieve Track 1 unrestricted use therefore, no EE or SMP is anticipated.

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 2 restricted residential cleanup at a minimum.

7. 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.

Environmental Easement

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 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 the New York City Department of Health and Mental Hygiene (NYCDOHMH); and
- require compliance with the Department approved Site Management Plan.

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 required 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.

This plan includes, but may not be limited to:

- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings 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 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;
  - a schedule of monitoring and frequency of submittals to the Department; and
  - 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.

October 19, 2022



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Date

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Richard A. Mustico, Director  
Remedial Bureau A

# DECISION DOCUMENT

Former Carter Spray Finishing Corp.  
Brooklyn, Kings County  
Site No. C224218  
October 2022

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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, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

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=C224218>

Brooklyn Public Library - Greenpoint Branch  
107 Norman Avenue  
Brooklyn, NY 11222  
Phone: 718-349-8504

Brooklyn Community Board 1  
435 Graham Avenue  
Brooklyn, NY 11211  
Phone: 718-389-0009

### **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**

**Location:** The 0.23-acre site is located at 65 Eckford Street in the Greenpoint section of Brooklyn, Kings County and is identified as Block 2698, Lot 26 on the New York City tax map. The site is bounded to the north by a four-story residential building; to the east by Eckford Street followed by residential apartment buildings; to the south by a residential apartment building currently in construction; and to the west by a four-story residential building and a one-story industrial building.

**Site Features:** The site is an irregular shaped vacant lot that is partially excavated due to an incomplete prior remedial effort, described in Section 6.2 Interim Remedial Measures, below.

**Current Zoning:** The land is currently located within a MX-8 Special Mixed-Use District (MX) and zoned as M1-2/R6A for "medium-density apartment house districts," which allows for residential use.

**Past Use of the Site:** The site was developed in 1905 and improved with several one-story manufacturing buildings occupied by the Meisel Danowitz & Co. woodworking operation. The site was redeveloped by 1916 with a one to two-story building and had been utilized by several industrial operations including a machine shop, wood box manufacturing facility, automobile parking garage and metal finishing facility. The site was occupied by the Carter Spray Finishing Corporation from 1960 to 2008, which used the building for metal finishing and spraying. Records indicate that the former metals finishing facility utilized two 275-gallon aboveground storage tanks that contained trichloroethene (TCE) and were located in the northeast portion of the site. The building was razed, and the site cleared in 2015.

**Site Geology and Hydrogeology:** The site was previously excavated to a depth of six feet below sidewalk grade. Site stratigraphy consists of urban fill generally consisting of brown to dark brown, medium to fine silty sand with varying amounts of loose gravel, asphalt, brick, cinders, and plastic, which was observed from the current grade to depths extending approximately eight to nine feet below sidewalk grade. The urban fill layer is underlain by a native layer consisting of gray to dark

gray medium to fine silty sand with varying amounts of coarse sand and clay to depths extending approximately 16 to 17 feet below sidewalk grade. Following this native layer was an organic/peat layer observed up to the terminus depth of each soil boring, ranging from 20 to 21 feet below sidewalk grade. According to the United States Geographical Survey (USGS) topographic map for the area (Brooklyn Quadrangle), the elevation of the property is about 14 feet above mean sea level. The area topography gradually slopes downward to the north and west.

Groundwater is present beneath the site at a depth of 12 to 13 feet below sidewalk grade. Regional groundwater flow is to the west-northwest.

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, an alternative that restricts 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) 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) against unrestricted use standards, criteria and guidance values (SCGs) for the site contaminants is available in the RI Report.

#### **SECTION 5: ENFORCEMENT STATUS**

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Volunteer does not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment; accordingly, enforcement actions are necessary.

The Department will seek to identify any parties (other than the Volunteer) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

#### **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 reports are 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 contaminants of concern identified at this site are:

benzo(a)anthracene	vinyl chloride
benzo(b)fluoranthene	benzo(a)pyrene
cis-1,2-dichloroethene	chloroethane
chrysene	trichloroethene (TCE)
tetrachloroethene (PCE)	isopropylbenzene
n-propylbenzene	arsenic
lead	mercury

The contaminants 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.

The following IRM has been completed at this site based on conditions observed during the RI.

### **Site Excavation**

An IRM was commenced to install a secant pile wall around the site perimeter, which will remain onsite, to hydraulically control groundwater migration and facilitate the excavation of contaminated soils below the water table. A secant pile wall is an interlocked series of individually drilled reinforced concrete piles which overlap to form a continuous, water-tight underground wall. It serves as a retaining wall during soil removal and inhibits groundwater infiltration onto the site. The secant pile wall at the site consists of 292 piles, each two feet in diameter and drilled to a depth of forty feet below ground. The wall was completed; however, the soil excavation was only partially completed to a depth of approximately five to six feet below grade. 6,458 tons of soil were removed and properly disposed of off-site. As the soil excavation was only partially completed, soil cleanup objectives (SCOs) were not achieved.

## **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:**

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides. Soil vapor samples were analyzed for VOCs. Based upon the results of the investigations conducted to date, the primary contaminants of concern at the site are metals: arsenic, lead and mercury and semi-volatile organic compounds (SVOCs) [primarily polyaromatic hydrocarbons (PAHs)], which are present site-wide in historic fill material and deeper soil. Petroleum-related VOCs and chlorinated VOCs are present in groundwater at levels above NYS groundwater standards. High levels of chlorinated VOCs were documented in on-site soil vapor samples.

#### Soils:

Metals, SVOCs and/or VOCs were detected in soil samples at levels above unrestricted use SCOs (UUSCOs) and/or protection of groundwater SCOs (PGWSCOs), in the majority of samples throughout the site. Contamination sitewide ranges from the surface to approximately 20-feet below grade.

VOCs exceeding PGWSCOs include TCE at a maximum concentration of 0.5 parts per million (ppm) compared to the PGWSCO of 0.47 ppm and cis-1,2-dichloroethene at up to 0.33 ppm (PGSCO 0.25 ppm). Isopropylbenzene, n-propylbenzene, chloroethane and vinyl chloride were either not detected or detected below their respective UUSCOs and PGWSCOs. Vinyl chloride was detected in one soil sample at 0.00037 ppm, well below its UUSCO of 0.02 ppm. PCE was not detected in soil samples.

Metals detected above UUSCOs include arsenic at a maximum concentration of 40.2 parts per million (ppm), exceeding its UUSCO of 13 ppm; lead at up to 2,790 ppm (UUSCO 63 ppm) and mercury at up to 73.1 ppm (UUSCO 0.18 ppm).

SVOCs exceeding UUSCOs include benzo(a)anthracene at a maximum concentration of 3.4 ppm, exceeding its UUSCO of 1 ppm, benzo(a)pyrene at up to 2.7 ppm (UUSCO 1 ppm), chrysene at up to 6.6 ppm (UUSCO 1 ppm) and benzo(b)fluoranthene at up to 3.7 ppm (UUSCO 1 ppm).

Data does not indicate off-site impacts in soil related to this site.

#### Groundwater:

Several VOCs were detected in groundwater samples at concentrations above the New York State Ambient Water Quality Standards (AWQS). Isopropylbenzene at up to 100 ppb (AWQS 5 ppb); n-propylbenzene at up to 130 ppb (AWQS 5 ppb), cis-1,2-dichloroethene at 69 ppb (AWQS 5 ppb); chloroethane at up to 130 ppb (AWQS 5 ppb); trichloroethene at up to 6.2 ppb (AWQS 5 ppb); and vinyl chloride at 51 ppb (AWQS 2 ppb).

For metals, iron, manganese and sodium exceeded AWQS in the majority of groundwater samples. However, these metals are naturally occurring in areawide groundwater and are not indicative of site-related contamination.

For the PFAS compounds, perfluorooctanoic acid (PFOA) was detected in all five groundwater monitoring wells at values ranging from 27 parts per trillion (ppt) up to 110 ppt. Perfluorooctanesulfonic acid (PFOS) was detected in groundwater up to 4.01 ppt at the site. The maximum contaminant level, or MCL (drinking water standard) for both compounds is 10 ppt. However, groundwater in this area is not used as drinking water. The highest PFOA detections were in wells on the upgradient side of the site. The sitewide presence of PFAS indicates an area-wide groundwater condition that is not specifically site-related.

1,4-Dioxane was detected in two monitoring wells at a maximum concentration of 2.78 ppb, exceeding the MCL of 1 ppb. Both detections were in wells on the upgradient areas of the site.

Data indicates off-site impacts in groundwater related to this site are a possibility and will be evaluated as part of an off-site investigation.

#### Soil Vapor:

Chlorinated VOCs were detected in all soil vapor samples throughout the site. The highest chlorinated VOC detections were all at one sample location, SV-05: TCE was detected at up to 9,670 micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ), cis-1,2-dichloroethene at up to 2,750  $\text{ug}/\text{m}^3$ , PCE up to 171  $\text{ug}/\text{m}^3$  and vinyl chloride at up to 177  $\text{ug}/\text{m}^3$ .

Data indicates off-site impacts in soil vapor related to this site are a possibility and will be evaluated as part of an off-site investigation.

### **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 soil vapor (air spaces within the soil) may move into 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. Currently there are no occupied buildings on the site, so soil vapor intrusion does not represent a current concern. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. In addition, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for off-site buildings.

### **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 1: Unrestricted use remedy.

The selected remedy is referred to as the Excavation, Groundwater Treatment and Soil Vapor Evaluation 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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- 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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- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
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Excavation and off-site disposal of all on-site soils which exceed the unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 unrestricted cleanup is achieved, a Cover System will not be a required element of the remedy. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/documentation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify DEC, submit the sample results and, in consultation with DEC, determine if further remedial excavation is necessary. Further excavation for development, if needed, will proceed after confirmation samples demonstrate that the SCOs for the site have been achieved.

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## 4. In-Situ Chemical Reduction:

An in-situ chemical reduction (ISCR) will be implemented to treat contaminants in groundwater remaining following cessation of dewatering. A chemical reducing reagent will be amended into selected areas at the bottom of the soil excavation. Monitoring will be conducted for VOCs

upgradient and downgradient of the treatment zone.

5. Vapor Intrusion Evaluation:

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6. Local Institutional Controls:

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Contingent Track 1

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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 2 restricted residential cleanup at a minimum.

7. Institutional Controls:

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Environmental Easement

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- 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 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 the New York City Department of Health and Mental Hygiene (NYCDOHMH); and
- require compliance with the Department approved Site Management Plan.

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 required 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.

This plan includes, but may not be limited to:

- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings 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 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;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.





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MAP SOURCE: ESRI  
 SITE COORDINATES: 40°43'19"N, 73°56'54"W

**HALEY  
ALDRICH**

65 ECKFORD STREET  
 BROOKLYN, NEW YORK

**PROJECT LOCUS**



APPROXIMATE SCALE: 1 IN = 2000 FT  
 AUGUST 2021

**FIGURE 1**

GIS FILE PATH: C:\Users\hwacholz\Documents\working\persesded\202156\GIS\Maps\2021\_08\202156\_000\_0002\_SITE\_PLAN.mxd — USER: hwacholz — LAST SAVED: 8/5/2021 1:00:46 PM



**LEGEND**

-  SITE BOUNDARY
-  Groundwater Flow

**NOTES**

1. ALL LOCATIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: NEARMAP, 12 MARCH 2021



**HALEY  
ALDRICH**

65 ECKFORD STREET  
BROOKLYN, NEW YORK

SITE PLAN

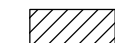



AUGUST 2021

FIGURE 2

C:\GIS\FILE PATH\ HaleyAldrich.com\share\CF\Projects\2021\66\GIS\Maps\2022\_03\2021\66\_000\_0008\_ALTERNATIVE\_1\_EXCAVATION\_PLAN.mxd — USER: hwaehholz — LAST SAVED: 3/11/2022 4:55:56 PM

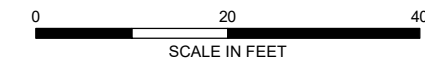


**LEGEND**

-  ALTERNATIVE 1 / TRACK 1 REMEDIAL EXCAVATION TO 25 FT BGS
-  SITE BOUNDARY
-  PROPOSED DEEPER EXCAVATION AND IN SITU CHEMICAL REDUCTION (ISCR) TREATMENT AREA
-  PROPOSED POST REMEDIATION MONITORING WELL LOCATION

**NOTES**

1. ALL LOCATIONS ARE APPROXIMATE.
2. BASEMAP REFERENCED FROM NEW RESIDENTIAL BUILDING 65 ECKFORD STREET, BROOKLYN, N.Y., PREPARED BY S. WIEDER ARCHITECT PC, DATED 2.21.2022
3. FT BGS = FEET BELOW GROUND SURFACE
4. AERIAL IMAGERY SOURCE: NEARMAP, 12 MARCH 2021



**HALEY ALDRICH** 65 ECKFORD STREET  
BROOKLYN, NEW YORK

**ALTERNATIVE I EXCAVATION PLAN**

MARCH 2022

FIGURE 3