DECISION DOCUMENT

1440-1460 39th Street Site
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224311
October 2021

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

DECLARATION STATEMENT - DECISION DOCUMENT

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Statement of Purpose and Basis

This document presents the remedy for the 1440-1460 39th Street 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 1440-1460 39th Street 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.
- 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 removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. Excavation and off-site disposal of all on-site soils which:

- exceed residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet;
- exceed the 6 NYCRR Part 371 hazardous criteria for lead;
- create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Approximately 6,500 cubic yards of contaminated soil will be removed from the site. The excavation commenced under an approved IRM Work Plan as discussed in Section 6.2 of this Decision Document.

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

4. Local Institutional Controls
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 Remedial Elements:
The intent of the remedy is to achieve Track 2 residential use; therefore, no environmental easement or site management plan is anticipated.

In the event that Track 2 residential use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup:

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

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

6. Site Management Plan
A 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 above.

This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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.

September 21, 2022

Date

Gerard Burke
Director, Remedial Bureau B

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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=C224311

Brooklyn Public Library-Borough Park Library
1265 43rd Street
Brooklyn, NY 11219
Phone: (718) 437-4085

Brooklyn Community Board No. 12
5910 13th Ave.
Brooklyn, NY 11219
Phone: (718) 851-0800

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 is located at in the Borough Park section of Brooklyn. The site is located in a dense industrial/commercial neighborhood with some adjacent residential uses interspersed between commercial and industrial buildings. The site consists of one tax parcel designated as Block 5346, Lot 17. Previously, the site contained four lots (17, 26, 28 and 149), but these have since been merged into Lot 17.

Site Features
All previous on-site buildings have been demolished. The site is currently excavated to a depth of approximately 14 feet below grade.

Current Zoning and Land Use
The vast majority of the site is currently located within an M1-2 (manufacturing) District. There is a small triangular area within the adjacent R6 (residential) zoning. The site is currently vacant. The surrounding properties are commercial and industrial with residential properties interspersed in between these properties. These adjacent properties consist of auto repair shops, office spaces, retail shops, restaurants and multifamily residential buildings. The southwest side of the site is located both on and next to a residential area (zoning district R6). The residential area starts approximately 200 feet to the southeast, down 39th Street, and adjacent to the site on 40th Street.

Past Use of the Site
From the 1920's, the majority of the site was used as a garage, auto repair facility, and office space for with a call center for private taxis. Since vehicles were fueled on-site, there were a number of underground storage tanks present during its years of operation. Previously, Lot 17 was used as a public motor vehicle parking in the open space to the southeast of the buildings located on the site. The building space on former Lot 28 was temporarily being rented to Amazon, but is now vacant.

Site Geology and Hydrogeology
Subsurface soil is generally fill material consisting of sand, silt, wood, cobbles, boulders, and

concrete to a depth of 12-14 feet below ground surface. The fill material is underlain with fine to coarse sand. Groundwater was observed at approximately 45 feet. Based on monitoring well elevations, groundwater flows to the west. The site is not in a flood zone.

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 residential use (which allows for restricted-residential use, 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 under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does 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:

benzo(a)anthracene	chromium
benzo(a)pyrene	lead
benzo(b)fluoranthene	mercury
indeno(1,2,3-CD)pyrene	nickel

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.

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

IRM Soil Removal

This IRM consisted of removing seven Underground Storage Tanks (USTs) and excavating and disposing off-site contaminated soil to approximately 14 feet below surface grade across most of the site to remove historic fill. This IRM completed all the required excavation work as specified in Remedial Element (2). The IRM will be detailed in Final Engineering Report to be approved by the Department.

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), pesticides, per- and polyfluoroalkyl substances (PFAS), and 1,4-dioxane. Soil vapor was sampled for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for the site include SVOCs and metals.

Soil: 96 soil samples were collected from 14 soil borings during the Remedial Investigation (RI). There were no exceedances of VOCs above residential soil cleanup objectives (RSCOs). Several SVOCs exceed the RSCOs across the site in the upper 15 feet, including benzo(a)anthracene at 21 parts per million (ppm), benzo(a)pyrene at 17 ppm, benzo(b)fluoranthene at 24 ppm compared to their RSCO of 1 ppm; and indeno(1,2,3-CD)pyrene at 12 ppm versus the RSCO of 0.5 ppm. There were exceedances of metals, including maximum levels of chromium at 154 ppm compared to the RSCO of 22, lead at 1,050 ppm compared to the RSCO of 400 ppm, mercury at 19.9 compared to the RSCO of 0.81 ppm, and nickel at 320 ppm, compared to the RSCO of 140 ppm. There were no exceedances of pesticides, or PCBs above RSCOs. PFAS was not detected at concentrations exceeding the residential guidance values. Data does not indicate any off-site impacts in soil related to this site.

Groundwater: Eight groundwater samples were obtained as part of the RI. There were metal and SVOC exceedances in unfiltered groundwater samples and may have been affected by suspended soil particles in the sample. However, no exceedances of these compounds were detected when dissolved samples were analyzed. There was one exceedance of VOCs, 1,2,4,5-tetramethylbenzene at 8.4 parts per billion (ppb) slightly above its AWQS of 5. There were no exceedances of PCBs or pesticides. The highest detection of PFOA was 111 parts per trillion (ppt), and the highest detection of PFOS was 21.4 ppt, which both exceed the maximum contaminant level (MCL) of 10 ppt in drinking water for each compound. There were three detections of 1,4-dioxane, but these results did not exceed the AWQS. Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor: Six soil vapor points were sampled during the RI. Multiple VOCs were detected in each soil vapor sample collected from the subject property. Petroleum related compounds, such as

benzene and toluene were detected in each soil vapor sample. Chlorinated VOCs were detected at maximum concentrations of trichloroethene (TCE) at 1.57 micrograms per cubic meter (ug/m3) and tetrachloroethene (PCE) at 6.67 ug/m3. Data does not indicate any off-site impacts in soil vapor related to this site.

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. People are not drinking the contaminated groundwater because the area is served by a public water supply that is 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. Because there is no on-site building, and the top 14 feet of soil was removed during an interim remedial measure, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition, and for any future redevelopment and occupancy. In addition, sampling indicates soil vapor intrusion is not a concern 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.

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.

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 2: Residential use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation 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;
- 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.
- 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 removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. Excavation and off-site disposal of all on-site soils which:

- exceed residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet;
- exceed the 6 NYCRR Part 371 hazardous criteria for lead;
- create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Approximately 6,500 cubic yards of contaminated soil will be removed from the site. The excavation commenced under an approved IRM Work Plan as discussed in Section 6.2 of this Decision Document.

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

4. Local Institutional Controls
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 Remedial Elements:
The intent of the remedy is to achieve Track 2 residential use; therefore, no environmental easement or site management plan is anticipated.

In the event that Track 2 residential use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup:

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

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

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

b. 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 above.

   This plan includes, but may not be limited to:
   - descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
   - provisions for the management and inspection of the identified engineering controls;

- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.