# **DECISION DOCUMENT**

147-35 95th Avenue - Site A
Brownfield Cleanup Program
Jamaica, Queens County
Site No. C241263
December 2022



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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

147-35 95th Avenue - Site A Brownfield Cleanup Program Jamaica, Queens County Site No. C241263 December 2022

# **Statement of Purpose and Basis**

This document presents the remedy for the 147-35 95th Avenue - Site A, 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 147-35 95th Avenue - Site A 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 off-site disposal of all on-site soils which exceed Restricted-Residential SCOs in the upper 15 feet, as defined by 6 NYCRR Part 375-6.8. If a Track 2 Restricted-Residential 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 will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

Excavation and removal of any unknown underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Approximately 2,313 cubic yards of contaminated soil will be removed from the site.

#### 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 establish the designed grades at the site.

# 4. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from the subsurface.

### 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 5

above.

 Engineering Controls: The sub-slab depressurization system discussed in Paragraph 4 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.
- b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
  - monitoring of soil vapor 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.
- c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:
  - procedures for operating and maintaining the system(s); and
  - compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

### **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.

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December 8, 2022	And W Bill
Date	Gerard Burke, Director
	Remedial Bureau B

DECISION DOCUMENT 147-35 95th Avenue - Site A, Site No. C241263

# **DECISION DOCUMENT**

Jamaica, Queens County
Site No. C241263
December 2022

# **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 <a href="https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C241263">https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C241263</a>

Queens Community Board #12 90-28 161st Street Jamaica, NY 11435 Phone: (718) 658-3308

DECISION DOCUMENT 147-35 95th Avenue - Site A, Site No. C241263 Queens Public Library - Central 89-11 Merrick Boulevard Jamaica, NY 11432 Phone: (718) 990-0700

# 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 <a href="http://www.dec.ny.gov/chemical/61092.html">http://www.dec.ny.gov/chemical/61092.html</a>

## **SECTION 3: SITE DESCRIPTION AND HISTORY**

Location: The 0.69-acre site is located at 147-35 95th Avenue, Jamaica, NY and is designated as Tax Block 9999, Lot 40. It is a rectangular-shaped parcel located at the northwestern corner of 95th Avenue and 148th Street. The site has approximately 325 feet of frontage along 95th Avenue and 100 feet of frontage along 148th Street.

Site Features: The site is currently vacant, unimproved and overgrown with vegetation. A small part of the eastern portion of the site is paved with concrete.

Current Zoning and Land Use: The site is zoned C6-4, denoting a high-bulk commercial district requiring a central location. High-rise, mixed-use commercial and residential buildings are permitted under this zoning designation.

Past Uses of the Site: The site was initially developed sometime prior to 1901 with dwellings and a carpenter's shop. By 1911, the carpenter's shop was no longer present, and a saw clamp manufacturer and contractor's stable occupied the site. By 1925, the site buildings were demolished and a 1.5-story meat packing facility, dwellings and a one-story garage with a gasoline underground storage tank (UST) are depicted on the Sanborn Map. By 1942, the dwellings and one-story garage had been demolished and the meat packing facility was expanded to the east. The meat packing facility was demolished in 2007 and the site has been vacant since that time.

Site Geology and Hydrogeology: The site is located at an average elevation of approximately 39 feet above mean sea level and is relatively flat. The site is underlain by a continuous layer of historic fill consisting of brown silt with sand, gravel, concrete fragments, brick fragments, and coal fragments ranging in thickness from five to 20 feet below sidewalk grade (ft-bsg). The fill layer is underlain by a native layer of medium- to coarse-grained sand to at least 30 ft-bsg. Groundwater at the site was measured at approximately 20 to 22 ft-bsg. A well survey was performed as part of the Remedial Investigation and groundwater was determined to flow to the southwest.

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 that restrict the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were evaluated in addition to an alternative which would allow for unrestricted use of the site.

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

## **SECTION 5: ENFORCEMENT STATUS**

The 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: <a href="http://www.dec.ny.gov/regulations/61794.html">http://www.dec.ny.gov/regulations/61794.html</a>

# 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:

chrysene trichloroethene (TCE)
benzo(b)fluoranthene chloroform
benzo(a)anthracene benzo(a)pyrene
arsenic indeno(1,2,3-cd)pyrene
polychlorinated biphenyls (PCB) xylene (mixed)
tetrachloroethene (PCE) trichlorofluoromethane

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

- soil
- groundwater

# **6.2:** Interim Remedial Measures

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

There were no IRMs performed at 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.

### 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 investigations conducted to date, the primary contaminants of concern include SVOCs and metals in soil, and VOCs in soil vapor.

Soil – SVOCs were detected in shallow and deep soil samples at concentrations exceeding the restricted residential use soil cleanup objectives (RRSCOs), including benzo(a)anthracene (max. 35 part per million [ppm] compared to the RRSCO of 1 ppm), benzo(a)pyrene (max. 28 ppm, RRSCO is 1 ppm), benzo(b)fluoranthene (max. 37 ppm, RRSCO is 1 ppm), benzo(k)fluoranthene (max. 13 ppm, RRSCO is 3.9 ppm), chrysene (max. 33 ppm, RRSCO is 3.9 ppm), dibenzo(a,h)anthracene (max. 4.8 ppm, RRSCO is 0.33 ppm), and indeno(1,2,3-cd)pyrene (max. 19 ppm, RRSCO is 0.5 ppm). PCBs were detected at a maximum concentration of 1.44 ppm (RRSCO is 1 ppm). One metal, arsenic, was detected at a maximum concentration of 142 ppm (RRSCO is 16 ppm).

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

Groundwater – One VOC, chloroform, was detected in exceedance of the Ambient Water Quality Standard (AWQS) at a maximum concentration of 9.1 parts per billion (ppb) compared to the AWQS of 7 ppb. Several SVOCs were detected at concentrations exceeding the AWQSs, including benzo(a)anthracene (max. 0.06 ppb), benzo(a)pyrene (max. 0.02 ppb), benzo(b)fluoranthene (max. 0.04 ppb), benzo(k)fluoranthene (max. 0.02 ppb), chrysene (max. 0.04 ppb) and indeno(1,2,3-cd)pyrene (max. 0.03 ppb). All of the aforementioned analytes have an AWQS of 0.002 ppb, with the exception of benzo(a)pyrene, which has an AWQS of non-detect. Two dissolved metals, manganese (max. 1,554 ppb) and sodium (max. 112,000 ppb), were detected in exceedance of AWQSs of 300 ppb and 20,000 ppb, respectively. These are naturally occurring metals and are not considered to be contaminants of concern for this site. Two PFAS compounds were detected in exceedance of the NYSDOH maximum contaminant limit (MCL or drinking water standard) at maximum concentration of 27.1 parts per trillion (ppt) for PFOA and 36.7 ppt for PFOS compared to the MCL or 10 ppt each. Data does not indicate any off-site impacts in groundwater-related to this site.

Soil Vapor – Multiple VOCs were detected in soil vapor throughout the site, including tetrachloroethene (PCE) at a maximum concentration of 371 micrograms per cubic meter (ug/m³), trichloroethene (TCE) at a maximum concentration of 58.6 ug/m³, trichlorofluoromethane (max. 129 ug/m³), and xylenes (max. 74.5 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*.

People will not come into contact with contaminated soil unless they dig below the ground surface. People are not drinking the contaminate 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 structures 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 structures, is referred to as soil vapor intrusion. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. In addition, environmental sampling indicates that 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.

## 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 2: Restricted use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation and Soil Vapor Mitigation remedy.

The elements of the selected remedy, as shown in Figures 4 and 5, 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;
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- 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

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DECISION DOCUMENT 147-35 95th Avenue - Site A, Site No. C241263 excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

Excavation and removal of any unknown underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Approximately 2,313 cubic yards of contaminated soil will be removed from the site.

#### 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 establish the designed grades at the site.

#### 4. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from the subsurface.

#### 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 5
  - Engineering Controls: The sub-slab depressurization system discussed in Paragraph 4 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.

DECISION DOCUMENT December 2022 Page 11

- b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
  - monitoring of soil vapor 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.
- c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:
  - procedures for operating and maintaining the system(s); and
  - compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.





