DECISION DOCUMENT

1665 Stillwell Avenue Brownfield Cleanup Program Brooklyn, Kings County Site No. C224307 July 2025



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

DECLARATION STATEMENT - DECISION DOCUMENT

1665 Stillwell Avenue Brownfield Cleanup Program Brooklyn, Kings County Site No. C224307 July 2025

Statement of Purpose and Basis

This document presents the remedy for the 1665 Stillwell Avenue 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 (NYSDEC) for the 1665 Stillwell Avenue site and the public's input to the proposed remedy presented by NYSDEC.

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 shall be

constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise[™] (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and nonrenewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

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 restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 1,185 cubic yards of contaminated soil will be removed from the site. 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 sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, 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.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to

receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

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. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compound (VOC) vapors from the subsurface and prevent off-site migration of contaminated vapor. VOCs will be physically removed from the subsurface by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOC vapors from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

Upon system startup, SVE wells will be tested to confirm vacuum influence and effectiveness of the system. If there are no SVE wells located near the site boundaries of concern, vacuum monitoring points will be installed near the site boundaries to evaluate SVE effectiveness at preventing off-site migration of contaminated vapors.

5. Treatment Remedy Shutdown

The operation of the SVE system components of the remedy will continue until the remedial objectives have been achieved, or until the NYSDEC determines that continued operation is technically impracticable or not feasible.

6. 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.

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.

8. 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 NYSDEC 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, commercial use, or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws [1];
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOHMH; and

• require compliance with the NYSDEC approved Site Management Plan.

9. 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 engineering controls remain in place and effective:
 - Institutional Controls: The Environmental Easement discussed in Remedy Element 8 above.
 - Engineering Controls: The soil vapor extraction system discussed in Remedy Element 4, and the vapor mitigation system discussed in Remedy Element 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 NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and 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; and
 - a schedule of monitoring and frequency of submittals to the NYSDEC;
 - 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, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
 - procedures for operating and maintaining the remedy;
 - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
 - maintaining site access controls and NYSDEC notification; and
 - providing the NYSDEC access to the site and O&M records.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration NYSDEC guidance, as appropriate. The remedy is protective of public health and the environment.

July 2, 2025

Date

R. Scott Deyette

Scott Deyette, Director Remedial Bureau B

DECISION DOCUMENT

1665 Stillwell Avenue Brooklyn, Kings County Site No. C224307 July 2025

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (NYSDEC), 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.

NYSDEC 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: <u>CITIZEN PARTICIPATION</u>

NYSDEC 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 NYSDEC 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=C224307

Brooklyn Public Library - Highlawn Branch 1664 West 13th Street at Kings Highway Brooklyn, NY 11223 Phone: (718) 234-7208 Brooklyn Community Board 11 2214 Bath Avenue Brooklyn, NY 11214 Phone: (718) 266-8800

Receive Site Citizen Participation Information By Email

Please note that NYSDEC'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. public for encourage the to sign up one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Site Location and Description: The site is located at 1665 Stillwell Avenue in the Bensonhurst neighborhood of Brooklyn and identified as Tax Block 6618 Lot 48 on the NYC tax map. The site has an area of approximately 0.184 acres. The site is bordered to the north by a commercial building followed by Kings Highway; to the east by a public library and a mixed-use building followed by West 13th Street; to the south by a residential building followed by Quentin Road; and to the west by Stillwell Avenue followed by residential buildings.

Site Features: The site is currently a partially paved, empty lot.

Current Zoning and Land Use: The site is zoned residential (R6B) with a commercial overlay (C2-3). The site is currently the site is a paved lot and is vacant.

Past Use of the Site: The site has been developed since 1955 with a commercial building. The site has had several commercial uses: ice cream stand (1955), a food store (1966), a dairy (between 1970-1976), Wonder Hostess Thrift Shop (around 1985 and 1997), and drycleaner (1999 - 2014). The on-site building and was demolished prior to the Remedial Investigation.

Site Geology and Hydrogeology: The stratigraphy of the site consists of a fill layer that extends between 4 to 12 feet below grade surface (bgs). The fill predominantly consists of brown to gray or black, fine- to medium-grained sand with varying amounts of silt, clay, gravel, concrete, asphalt, wood, glass, roots, and brick. The fill layer is underlain by native soil that predominantly consists of brown, fine grained-silty to clayey soil with gravel. Bedrock was not encountered in any of the soil borings and is deeper than 30- ft bgs.

Groundwater depth ranged from about 16-17 feet bgs. Groundwater flow is to the southwest.

A site location map is attached as Figure 1 and site boundary map is attached as Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC 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, two 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 Participant. The Applicant has an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: <u>Summary of the Remedial Investigation</u>

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site condition;
- 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 contamination. Data collected in the RI influenced 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. NYSDEC 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: <u>http://www.dec.ny.gov/regulations/61794.html</u>

6.1.2: <u>RI Results</u>

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:

tetrachloroethene (PCE) trichloroethene (TCE) sec-Butylbenzene Benzene Isopropylbenzene 2-Isopropyltoluene n-Butylbenzene

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

- 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: <u>Summary of Environmental Assessment</u>

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 samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides, perand polyfluoroalkyl substances (PFAS), and 1,4-dioxane. Soil vapor samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for the site include VOCs in groundwater and soil vapor.

Soil – Soil data were compared to Unrestricted Use Soil Cleanup Objectives (UUSCO), Protection of Groundwater Soil Cleanup Objectives (PGWSCO), and Restricted Residential Soil Cleanup Objectives (RRSCO). Unvalidated, historic data showed exceedances of metals; lead was detected at a maximum of 547 parts per million (ppm) (RSCO is 400 ppm); and cadmium was detected at 2.72 ppm (RSCO is 2.5 ppm). Tetrachloroethene (PCE) was detected at levels below the UUSCO level; however, that PCE in the soil may contribute to PCE in the soil vapor.

Perfluorooctanesulfonic acid (PFOS) was detected in soil at a concentration of 1.84 parts per billion (ppb), exceeding both the unrestricted use guidance value of 0.88 ppb and protection of groundwater guidance value of 1 ppb. Perfluorooctanoic acid (PFOA) was detected in soil at a concentration of 0.789 ppb, exceeding both the unrestricted use guidance value of 0.66 ppb and protection of groundwater guidance value of 0.8 ppb.

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

Groundwater - Several VOCs were detected in groundwater in exceedance of the Ambient Water Quality Standards and Guidance Values (AWQSGVs) including maximum concentrations of 2-Isoproyltoluene at 8.6 ppb (AWQSGV is 5 ppb); benzene at 2.1 ppb (AWQSGV is 1 ppb); isopropylbenzene at 100 ppb (AWQSGV is 5 ppb); n-butylbenzene at 14 ppb (AWQSGV is 5 ppb); n-propylbenzene at 140 ppb (AWQSGV is 5 ppb); and sec-butylbenzene at 17 ppb (AWQSGV is 5 ppb).

PFOS was detected at a maximum concentration of 130 parts per trillion (ppt) and PFOA was detected at a maximum concentration of 222 ppt, which exceed the AWQSGV of 2.7 ppt and 6.7 ppt, respectively.

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

Soil Vapor - Chlorinated VOCs were detected in soil vapor samples across the site, including maximum concentrations of PCE at 915 micrograms per cubic meter (μ g/m³) and trichloroethylene at 17.7 μ g/m³. Several petroleum related VOCs were detected in soil vapor samples throughout the site including maximum concentrations of benzene at 259 μ g/m³; ethylbenzene at 331 μ g/m³; m,p-xylene at 1,370 μ g/m³; o-xylene at 394 μ g/m³; 1,2,4-trimethylbenzene (TMB) at 614 μ g/m³; 1,3,5-TMB at 136 μ g/m³; and toluene at 3,030 μ g/m³.

6.4: <u>Summary of Human Exposure Pathways</u>

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*.

Access to the site is unrestricted and contact with contaminated soil or groundwater is unlikely unless people dig below the ground surface. 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 is referred to as soil vapor intrusion. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern but is a potential concern for any buildings developed onsite. Environmental sampling indicates soil vapor intrusion from site contamination is not a concern for off-site buildings.

6.5: <u>Summary of the Remediation Objectives</u>

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.

<u>Soil</u>

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

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: <u>ELEMENTS OF THE SELECTED REMEDY</u>

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 Residential use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation, Soil Vapor Extraction, and Sub-slab Depressurization System remedy.

The elements of the selected remedy, as shown in Figure 3 and 4, are as follows:

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;
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- 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 shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

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8. Institutional Control

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- require compliance with the NYSDEC approved Site Management Plan.

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- 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; and
 - a schedule of monitoring and frequency of submittals to the NYSDEC;
 - 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, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
 - procedures for operating and maintaining the remedy;
 - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
 - maintaining site access controls and NYSDEC notification; and
 - providing the NYSDEC access to the site and O&M records.



PREPARED BY:





SITE LOCATION MAP

1665 STILLWELL AVENUE BROOKLYN, NY

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	DRAWN:	SCALE:	DATE:	PROJECT NO ·
			02/14/2024	TROJECT NO.
	- CHECKED:	APPROVED:	REVISION:	NOTES:
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		KI	01/17/2023	-







LEGEND

PROPOSED REMEDIAL EXCAVATION

-4' SITE-WIDE EXCAVATION (TRACK 2)

PROPOSED CELLAR/BUILDING LINE
LOT LINE

DRAWN:	SCALE:	DATE:	PROJECT NO.:		
-	NTS	09/20/2024			
CHECKED:	APPROVED:	REVISION:	NOTES:		
KT	КТ	01/14/2025	-		
FIGURE NO.: 3					

