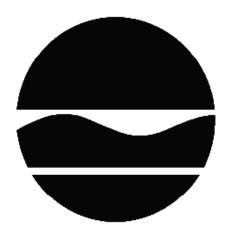
DECISION DOCUMENT

Former NY Cleaning and Dyeing Site Brownfield Cleanup Program Brooklyn, Kings County Site No. C224264 May 2018



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

DECLARATION STATEMENT - DECISION DOCUMENT

Former NY Cleaning and Dyeing Site Brownfield Cleanup Program Brooklyn, Kings County Site No. C224264 May 2018

Statement of Purpose and Basis

This document presents the remedy for the Former NY Cleaning and Dyeing Site site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Former NY Cleaning and Dyeing Site 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 with 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

The existing on-site building(s) will be demolished and materials which can't be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy. The remedy includes excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 36,395 cubic yards of contaminated soil will be removed from the site. The anticipated depth of excavation is 25 feet across the entire site.

The remedy also includes excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

4. Groundwater Dewatering and Treatment

Dewatering will be performed to facilitate the excavation. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system.

5. 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.

6. 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.

Local Institutional Controls

If no Environmental Easement or Site Management Plan is needed to achieve soil 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.

Contingency: Track 2

The intent of the remedy is to achieve Track 1: unrestricted use; therefore, no environmental easement or site management plan 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.

7. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat contaminants in saturated soil and groundwater below excavation limits if the SCOs cannot be achieved. A chemical oxidant will be injected into the subsurface to destroy the contaminants in any areas where postexcavation samples exceed the protection of groundwater SCOs for gasoline-related compounds. The method and depth of injection will be determined during the remedial design.

8. Institutional Controls

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.

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/or engineering controls remain in place and effective:
- Institutional Controls: The Environmental Easement discussed above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- descriptions of the provisions of the environmental easement including any land use, and groundwater or surface water 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 groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;

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.

May 10, 2018

Ad WBk

Gerard Burke, Director Remedial Bureau B

Date

DECISION DOCUMENT

Former NY Cleaning and Dyeing Site Brooklyn, Kings County Site No. C224264 May 2018

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: <u>CITIZEN PARTICIPATION</u>

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:

Brooklyn Community Board 3 1360 Fulton Street, Room 202 Brooklyn, NY 11216 Phone: 718-622-6601

Brooklyn Public Library – Williamsburg Branch 240 Division Avenue (at Marcy Avenue) Brooklyn, NY 11211 Phone: 718-302-3485

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:

The Former NY Cleaning and Dyeing Site is located in an urban area located in the Bedford Stuyvesant section of Brooklyn (Kings County), New York. The site is comprised of two tax parcels (Block 1884, Lots 40 and 48) totaling 39,307 square feet (sqft), or 0.902 acres. The site fronts on Flushing Avenue to the north, Franklin Avenue to the east, and Little Nassau Street to the south.

Site Features:

The entire footprint of the site is currently developed with four adjacent buildings. Lot 40 is developed with a one-story commercial building approximately 13,250 sqft in size, currently occupied by a door and molding company. Lot 48 is developed with three 2-story commercial buildings occupied by a catering hall, a warehouse for the door and molding company on Lot 40, and office space. According to the NYC Department of Buildings, the current buildings were constructed in 1924 (Lot 48) and 1966 (Lot 40).

Current Zoning and Land Use:

The site is currently zoned R7A for residential use, with a C2-4 overlay which allows for commercial use. The area immediately surrounding site consists of a three-story commercial building to the southeast and a residential apartment building to the west.

Past Use of the Site:

The buildings present on the site are in use as a wood door and molding manufacturer and warehouse (Lot 40, p/o Lot 48) and a catering hall (p/o Lot 48). Lot 40 appears to have been redeveloped by 1928 with the existing one-story building identified as Priemo Garage. By 1945 the building was used by Metropolitan Distributers for the storage of ice cream and delivery trucks. From 1928 to 1934, 380 Flushing Avenue (Lot 48) was used as an auto body fabricator while two 1-story buildings, identified as an auto body repair and a paper company, were located in the western portion of the Lot. A sheet metal works was identified on a portion of Lot 48 from 1928-1940.

By 1940, a commercial dry cleaning plant (NY Cleaners and Dyeing) occupied all of Lot 48. Based on the 1966 Certificate of occupancy, describing Lot 40 as being used for commercial vehicle storage and trucking terminal, the lack of city directory listings for this lot between 1949 and 1992 and the history of common ownership with Lot 48 by Uniform Rentals Inc., it is probable that both lots were part of the NY Cleaners-Uniform Rental operation with lot 40 being used to store and service the company's vehicle fleet from 1949 through 1986-1987. Although not reflected in the Sanborn Maps, the City Directory listings identify 376 Flushing Ave. (lot 40) as Alexander Supply (door and molding warehouse) in 1997 and 378 Flushing Ave (portion of lot 48) as Exclusive millwork in 1992. Exclusive Door and molding currently occupies both 376 and 378 Flushing Avenue. Therefore, the laundry operations and fleet maintenance garage vacated prior to these dates, most likely in 1986-1987 when Uniform Rentals sold the lots.

Site Geology and Hydrology:

The elevation of the site is approximately 16 feet above the National Geodetic Vertical Datum (NGVD). The area topography gradually slopes to the west. The depth to groundwater beneath the Site, as determined from field measurements, is approximately 9 to 13 feet below grade. Local groundwater flow is to the east. The nearest surface water body is Wallabout Channel, which is located approximately 0.5 miles from the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

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

SECTION 5: ENFORCEMENT STATUS

The Applicant 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 and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

The Department will seek to identify any parties (other than the Volunteer(s)) 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: <u>Summary of the Remedial Investigation</u>

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 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: <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:

vinyl chloride tetrachloroethene (PCE) 1,2,4-trimethylbenzene lead mercury

naphthalene ethylbenzene barium phenanthrene petroleum products

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

- groundwater
- soil

6.2: Interim Remedial Measures

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

There were no IRMs performed at this site during the RI.

6.3: <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 were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, poly-chlorinated biphenyls (PCBs), and metals. Soil vapor was analyzed for VOCs.

Soil - Elevated levels of petroleum-related VOCs and SVOCs were detected across the site, with the highest concentrations near the vicinity of three suspected underground storage tanks. The highest level VOC concentration, 1,2,4-trimethylbenzene, was detected at 470 parts per million (ppm) compared to the Unrestricted Soil Cleanup Objective (UUSCO) of 3.6 ppm and the Restricted-Residential Soil Cleanup Objective (RRSCO) value of 52 ppm. Ethylbenzene was also detected at a concentration of 120 ppm compared with the UUSCO of 1 ppm and the RRSCO value of 41 ppm. The highest concentration of SVOCs detected was phenanthrene at 260 ppm compared to the UUSCO of 100 ppm and the RRSCO value of 100 ppm. Naphthalene was also detected at 45 ppm, compared to the UUSCO of 12 ppm and the RRSCO value of 100 ppm. Several metals including barium (max. 1,040 ppm), lead (max. 1,380 ppm) and mercury (max. 14.5 ppm) exceeded UUSCOs and RRSCOs in soil. Chlorinated solvents were not detected in soil. Site-related soil contamination is not expected to be present off-site.

Groundwater - Petroleum related VOCs and SVOCs were detected in all 4 monitoring wells. The highest VOC concentration was 1,2,4-trimethylbenzene with a maximum concentration of 7,900 parts per billion (ppb) and SVOC concentration was naphthalene with a maximum concentration of 210 ppb compared to the Ambient Water Quality Standards of 5 ppb and 10 ppb, respectively. Separate-phase petroleum product was detected in one well. Chlorinated solvents were not detected in groundwater. Contaminated groundwater may extend off-site to the east.

Soil Vapor - Elevated levels of petroleum related volatile organic compounds were found, including ethylbenzene at 10,800 micrograms per cubic meter (ug/m3) and 1,2,4-trimethylbenzene at 1270 ug/m3. Chlorinated VOCs (CVOCs) were reported in all 10 soil vapor samples throughout the site. Tetrachlorethene (PCE) was detected with a maximum value of 485 ug/m3 and Vinyl Chloride with a maximum value of 358 ug/m3. Elevated concentrations were found at the property boundaries, indicating a possibility for off-site migration of site-related soil vapor.

Although none were encountered during the remedial investigation underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination may exist.

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*.

Direct contact with contaminants in the soil is unlikely because the entire site is covered with buildings. 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 the soil vapor may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any on-site occupancy or redevelopment. Additional investigation is needed to further evaluate the potential for soil vapor intrusion off-site.

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:

<u>Groundwater</u>

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.

<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.

RAOs for Environmental Protection

• Prevent migration of contaminants that would result in groundwater or surface water contamination.

<u>Soil Vapor</u>

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 1: Unrestricted use 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 with 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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Approximately 36,395 cubic yards of contaminated soil will be removed from the site. The anticipated depth of excavation is 25 feet across the entire site.

The remedy also includes excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

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Dewatering will be performed to facilitate the excavation. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system.

5. 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.

6. 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.

Local Institutional Controls

If no Environmental Easement or Site Management Plan is needed to achieve soil 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.

Contingency: Track 2

The intent of the remedy is to achieve Track 1: unrestricted use; therefore, no environmental easement or site management plan 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.

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In-situ chemical oxidation (ISCO) will be implemented to treat contaminants in saturated soil and groundwater below excavation limits if the SCOs cannot be achieved. A chemical oxidant will be injected into the subsurface to destroy the contaminants in any areas where post-excavation samples exceed the protection of groundwater SCOs for gasoline-related compounds. The method and depth of injection will be determined during the remedial design.

8. Institutional Controls

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.

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/or engineering controls remain in place and effective:
- Institutional Controls: The Environmental Easement discussed above.

This plan includes, but may not be limited to:

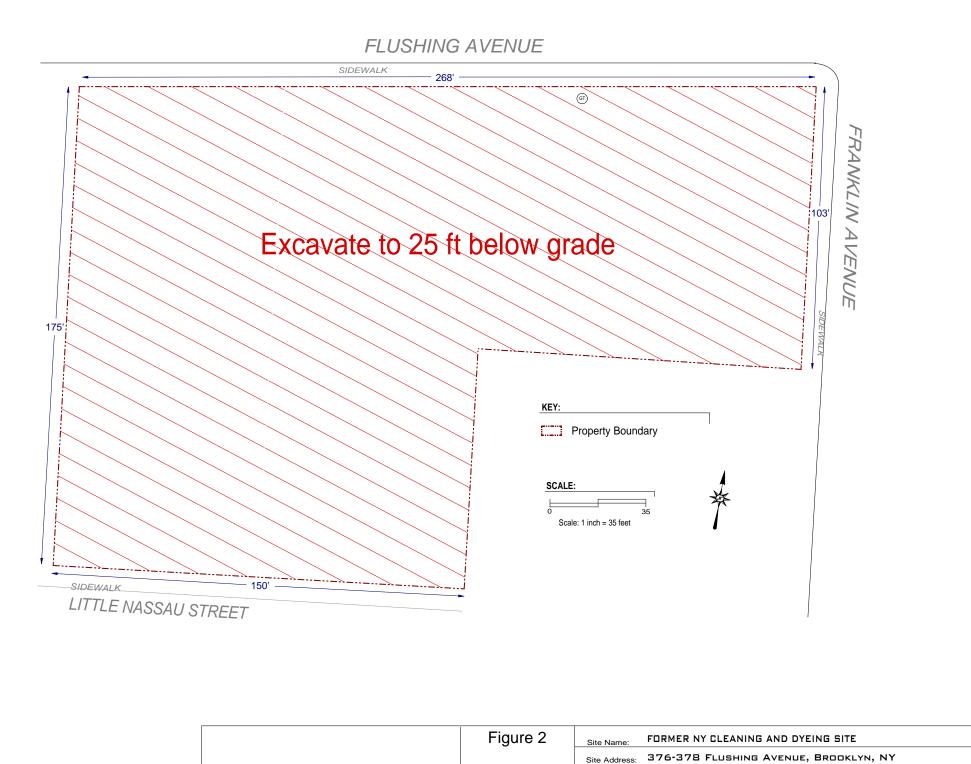
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- descriptions of the provisions of the environmental easement including any land use, and groundwater or surface water 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 groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;

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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