

DECISION DOCUMENT

644 East 14th Street Site
Brownfield Cleanup Program
New York, New York County
Site No. C231150
April 2023



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

644 East 14th Street Site
Brownfield Cleanup Program
New York, New York County
Site No. C231150
April 2023

Statement of Purpose and Basis

This document presents the remedy for the 644 East 14th 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 644 East 14th 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent

feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 to a depth of approximately 19 feet below sidewalk grade across the site. If a Track 1 unrestricted use cleanup is achieved, a Cover System will not be a required element of the remedy. If found on the site, any underground storage tanks (USTs), fuel dispensers, underground piping or other structures will be excavated and properly disposed off-site. Approximately 5,200 cubic yards of contaminated soil will be removed from the site.

Collection and analysis of confirmation 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 the Department, submit the sample results and, in consultation with the Department, 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 complete the backfilling of the excavation and establish the designed grades at the site.

4. 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, if necessary.

5. Local Institutional Controls

If no environmental easement or Site Management Plan is needed to achieve soil, groundwater or soil vapor intrusion 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.

Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated. If the soil vapor intrusion evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan and Environmental Easement will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, including achievement of soil and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted-residential cleanup.

6. 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, commercial or industrial uses 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 NYCDOHMH; and,
- require compliance with the Department approved Site Management Plan.

7. 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 remedial element 6 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;
- descriptions of the provisions of the environmental easement including any land use and/or groundwater restrictions;

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

Declaration

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

April 19, 2023



Date

Jane H. O'Connell
Regional Remediation Engineer
Region 2

DECISION DOCUMENT

644 East 14th Street Site
New York, New York County
Site No. C231150
April 2023

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=C231150>

Tompkins Square Library
331 East 10th Street
New York, NY 10009
Phone: (212) 228-4747
tompkinssquare@nypl.org

Manhattan Community Board 3
59 East 4th Street
New York, NY 10003
Phone: (212) 533-5300
mn03@cb.nyc.gov

Receive Site Citizen Participation Information By Email

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The 644 East 14th Street Site is located in an urban area of Manhattan, NY and consists of a single parcel identified on the New York City Tax Map as Block 396, Lot 29. The site is bounded to the north by East 14th Street, followed by a private housing complex (Stuyvesant Town); to the east by Avenue C, followed by a Con Edison facility; to the south by a parking lot and New York City Housing Authority residential complex (Campos Plaza II); and to the west by 5-story residential buildings along East 14th Street.

Site Features: Currently, the site is a vacant lot. Much of the site was partially excavated to a depth of approximately five feet below grade as part of building demolition completed by the site's previous owner.

Current Zoning and Land Use: The current zoning designation for the site is R7-2 residential with a C1-5 commercial overlay which allows for residential or mixed residential and commercial uses. No sensitive receptors such as schools, hospitals, and day-care facilities were identified within a 500-foot radius of the site.

Past Use of the Site: Prior to 1948, the site was developed with one 6-story building and two 5-story buildings with multiple storefronts. The site was utilized for auto parts sales and automobile repair beginning in 1948. The on-site building was demolished sometime between 2014 and 2020.

Site Geology and Hydrogeology: The stratigraphy of the site, beginning at sidewalk level, consists of approximately 6 feet of silty sand and fill (disintegrated brick, concrete, and glass shards) underlain by approximately 25 feet of fine sand with varying amounts of silt, or silt with trace to little sand. This material is underlain by glacial till to a depth of approximately 65 feet below sidewalk level, where decomposed and solid bedrock (mica schist) were identified.

The depth to groundwater beneath the site ranges from 6 to 7 feet below sidewalk level. Groundwater beneath the site flows from southeast to northwest based on groundwater level measurements collected from on-site monitoring wells. However, site groundwater flow may be impacted by a sheet pile wall currently installed at the site. Regional groundwater in the area of the site flows east toward the East River (located approximately 1,225 feet from the site) but may vary due to tidal influences.

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 restricts the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) 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: <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)pyrene	mercury
benzo(b)fluoranthene	arsenic
lead	indeno(1,2,3-cd)pyrene
copper	benzo(a)anthracene

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: 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 samples 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 samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for the site include SVOCs and metals in soil.

Soil: Soil samples were collected during the Remedial Investigation (RI) at depths ranging from the site's current grade to 21 feet below sidewalk grade. Several SVOCs exceed unrestricted use soil cleanup objectives (UUSCOs) across the site including benzo(a)anthracene at a maximum concentration of 36 parts per million (ppm), benzo(a)pyrene at a maximum concentration of 39 ppm, and benzo(b)fluoranthene at a maximum concentration 39 ppm, all compared to their respective UUSCOs of 1 ppm; and indeno(1,2,3-cd)pyrene at a maximum concentration 22 ppm, compared to its UUSCO of 0.5 ppm. There were exceedances of UUSCOs for metals in soils, including, but not limited to, mercury at a maximum concentration of 13.4 ppm (UUSCO of 0.18 ppm), copper at a maximum concentration of 1,150 ppm (UUSCO of 50 ppm), arsenic at a maximum concentration of 29.4 (UUSCO of 13 ppm), and lead at a maximum concentration of 2,380 ppm (UUSCO) of 63 ppm. SVOCs and metals in soil above UUSCOs are likely the result of historic fill and exceedances extend to a depth of approximately nineteen feet below sidewalk grade across the site.

One VOC (acetone, a common laboratory contaminant) was detected at a maximum concentration of 0.19 ppm, compared to its UUSCO of 0.05 ppm; and two pesticides, 4,4'-DDD and 4,4'-DDE were detected at a maximum concentration of 0.00643 ppm and 0.00649 ppm, compared to their respective UUSCOs of 0.0033 ppm. These exceedances are co-located with SVOC and metals exceedances of UUSCOs. There were no exceedances of UUSCOs for PCBs. The highest detection of PFAS in soil was perfluorooctanoic acid (PFOA) at 1.19 parts per billion (ppb), which is slightly above the unrestricted use guidance value of 0.66 ppb. Data does not indicate any off-site impacts in soil related to this site.

Groundwater: Five groundwater samples were collected as part of the RI. VOCs, SVOCs and metals detected in groundwater above Ambient Water Quality Standards and Guidance Values (AWQSGVs) included benzene in one sample at a concentration of 1.2 part per billion (ppb) compared to its AWQSGV of 1 ppb, benzo(a)anthracene at maximum concentration of 0.06 ppb compared to its AWQSGV of 0.002 ppb, phenol at maximum concentration of 10 ppb compared to its AWQSGV of 1 ppb, naphthalene at a maximum concentration of 76 ppb compared to its AWQSGV of 10 ppb, sodium at a maximum concentration of 73,800 ppb compared to its AWQSGV of 20,000 ppb, iron at a maximum concentration of 3,560 ppb compared to its

AWQSGV of 300 ppb, and manganese at a maximum concentration of 736.5 ppb compared to its AWQSGV of 300 ppb. Benzene and naphthalene were not present in soils at concentrations which would impact site groundwater. The presence of SVOCs in groundwater is likely due to the presence of entrained sediments in groundwater samples and not site soils. The presence of metals in groundwater are likely due to naturally occurring minerals.

There were no exceedances of AWQS for pesticides or PCBs.

The highest detection of PFOA in groundwater was 21.6 parts per trillion (ppt) which exceeds the AWQSGV of 6.7 ppt, and the highest detection of perfluorooctanesulfonic acid (PFOS) was 31.1 ppt which exceeds the AWQSGV of 2.7 ppt. Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor: Three soil vapor points were sampled during the RI. Multiple VOCs were detected in each soil vapor sample collected from the site. Tetrachloroethene (PCE) was detected in two soil vapor samples with a maximum concentration of 19.1 micrograms per cubic meter (ug/m³). Toluene, a petroleum-related compound, was detected in each soil vapor sample at a maximum concentration of 1,040 ug/m³. Other petroleum related compounds such as benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene, and p/m-xylene were detected in a one sample at the respective concentrations of 671 ug/m³, 654 ug/m³, 414 ug/m³, 916 ug/m³, and 1,420 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*.

Access to the site is restricted by a fence. However, persons who enter the site could contact contaminants in the soil by digging below the surface or otherwise disturbing the soil. Contaminated groundwater is not used for drinking and the site and surrounding areas are served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because the site is vacant, 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 inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Environmental sampling indicates soil vapor intrusion from site contamination 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.

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 Conditional Track 1 remedy.

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

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
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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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

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Collection and analysis of confirmation 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 the Department, submit the sample results and, in consultation with the Department, 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 complete the backfilling of the excavation and establish the designed grades at the site.

4. 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, if necessary.

5. Local Institutional Controls

If no environmental easement or Site Management Plan is needed to achieve soil, groundwater or soil vapor intrusion 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.

Conditional Track 1

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In the event that Track 1 unrestricted use is not achieved, including achievement of soil and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted-residential cleanup.

6. 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, commercial or industrial uses 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 NYCDOHMH; and,
- require compliance with the Department approved Site Management Plan.

7. 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 remedial element 6 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;
 - descriptions of the provisions of the environmental easement including any land use and/or groundwater restrictions;
 - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - 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:
- a schedule of monitoring and frequency of submittals to the Department; and
 - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

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LEGEND

-  SITE BOUNDARY
-  PARCEL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING
3. AERIAL IMAGERY SOURCE: NEARMAP, 27 FEBRUARY 2022



**HALEY
ALDRICH**

644 EAST 14TH STREET
NEW YORK, NEW YORK

SITE PLAN

JULY 2022

FIGURE 1

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LEGEND

-  19' EXCAVATION
-  SITE BOUNDARY

NOTES

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3. AERIAL IMAGERY SOURCE: NEARMAP, 27 FEBRUARY 2022



**HALEY
ALDRICH**

644 EAST 14TH STREET
NEW YORK, NEW YORK

ALTERNATIVE I EXCAVATION PLAN

FEBRUARY 2023

FIGURE 2