# **DECISION DOCUMENT**

East Adams Redevelopment - Phase II Area Brownfield Cleanup Program Syracuse, Onondaga County Site No. C734163 February 2025



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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

# East Adams Redevelopment - Phase II Area Brownfield Cleanup Program Syracuse, Onondaga County Site No. C734163 February 2025

#### **Statement of Purpose and Basis**

This document presents the remedy for the East Adams Redevelopment - Phase II Area, 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 (NYSDEC) for the East Adams Redevelopment - Phase II Area 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 the 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<sup>TM</sup> (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable 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 off-site disposal of all on-site soils which exceed restricted-residential soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. This will include approximately 14,700 cubic yards of contaminated soil being excavated and transported off-site for disposal. Maximum planned depth of excavation for this site is 9 feet per data collected during the Remedial Investigation showing soils below 9 feet meeting SCOs. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/documentation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify DEC, submit the sample results and, in consultation with DEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

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 excavated soil or complete backfilling of excavations and establish the designed grades at the site.

## 4. Vapor Mitigation System

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

5. Institutional Controls

Imposition of institutional controls 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.

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, commercial use, or industrial 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 County DOH; and

• require compliance with the NYSDEC approved Site Management Plan.

6. Site Management Plan

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

1. 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 Control: The Environmental Easement discussed in remedy element 5 above. Engineering Control: The sub-slab depressurization system discussed in remedy element 4 above.

2. 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 no limited to:

• descriptions of the provisions of the Environmental Easement including any land use and groundwater use restrictions;

- procedures for operating and maintaining the engineering control;
- compliance inspection of engineering control 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;
- providing the NYSDEC access to the site and O&M records; and

• the steps necessary for the periodic reviews and certification of the institutional and engineering controls.

### **Declaration**

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

February 12, 2025

Date

Jason Pelton, Director Remedial Bureau D

# **DECISION DOCUMENT**

East Adams Redevelopment - Phase II Area Syracuse, Onondaga County Site No. C734163 February 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: CITIZEN PARTICIPATION

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 repository:

DECInfo Locator - Web Application https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C734163

Onondaga County Public Libraries: the Central Library location Attn: Dan Smith 447 South Salina Street Syracuse, NY 13202 Phone: (315) 435-1900

## **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. We encourage the public to sign up for one or more county listservs at <u>http://www.dec.ny.gov/chemical/61092.html</u>

# SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The East Adams Redevelopment - Phase II Area site (site) is located at 1105 - 1117 South State Street and is a 2.540-acre site located in an urban area within the City of Syracuse. The site is bound by a railroad to the north, Oakwood Avenue to the east, Burt Street to the south, and South State Street to the west.

Site Features: The site is relatively flat with the topography of the surrounding area gently sloping towards the west-southwest. The site consists of primarily a gravel lot as well as areas covered with vegetation and/or trees and has no existing buildings at this time.

Current Zoning and Land Use: The site is currently inactive and is located within a City of Syracuse MX-2 zoned: Neighborhood Center District. The surrounding parcels are currently used for a combination of commercial, residential, and religious uses. Adjacent to the east of the site are commercial properties. Residential properties are located north beyond the railroad as well as south of the site. To the west there is a religious institution as well as commercial property.

Past Use of the Site: Historical site uses included both residential and commercial purposes including some petroleum storage use as early as 1910. By 1951, the southwestern portion of the site was developed with a gasoline station and automotive repair business. Additional uses of the site included a scrap yard, paper bailing, metal bailing, and most recently a Salvation Army warehouse, which was present from 1961 to 2003. In the early 2000s, the former buildings were demolished, and the site was configured into its current state as a gravel parking lot. Underground petroleum tanks were removed from the site in the late 1990s and mid 2000s.

Site Geology and Hydrogeology: The site elevation ranges from 397 to 399 feet above mean sea level. The site is underlain by a fill layer that extends to between about 1.5 and 9.5 feet below ground surface (ft bgs). The fill predominantly consists of tan to dark brown fine-grained sand with varying amounts of silt, clay, gravel, brick, concrete, fibrous vegetation, roots, construction debris, glass, asphalt, wood, coal, slag, and metal. The fill layer is underlain by native soil that predominantly consists of gray to brown fine-grained sand with varying amounts of clay, silt, and gravel. Bedrock was not encountered at soil boring depths down to 23 ft bgs. Groundwater depth ranges from approximately 7.93 to 11.48 ft bgs. The groundwater elevation is highest in the northeastern part of the site. Generalized groundwater flow at the site is to the southwest.

A site location map is attached as Figure 1 and a Site Boundary Map is attached as Figure 2.

# SECTION 4: LAND USE AND PHYSICAL SETTING

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

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

# SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, NYSDEC 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: <u>Summary of the Remedial Investigation</u>

A remedial investigation 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 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. NYSDEC has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For а full listing of all SCGs see. http://www.dec.ny.gov/regulations/61794.html

# 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 contaminants of concern identified at this site is/are:

1,2,4-trimethylbenzene	indeno(1,2,3-cd)pyrene
1,3,5-trimethylbenzene	lead
benzo(a)anthracene	mercury
benzo(a)pyrene	polychlorinated biphenyls (PCBs)
benzo(b)fluoranthene	xylene (mixed)
chrysene	perfluorooctanoic acid (PFOA)
dibenz[a,h]anthracene	perfluorooctane sulfonic acid (PFOS)

The contaminants 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), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), herbicides, and pesticides. Soil vapor samples and an outdoor air sample were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern include VOCs, SVOCs, and metals in soil as well as PFOS and PFOA in groundwater. VOCs are primary contaminants of concern in soil vapor as well.

Soil: Three VOCs were detected at concentrations exceeding the protection of groundwater soil cleanup objectives (PGSCOs), and/or restricted residential soil cleanup objectives (RRSCOs). All VOC detections were in the northwest corner of the site.

Two VOCs detected at concentrations exceeding RRSCOs include: 1,2,4- trimethylbenzene which was detected at a maximum concentration of 380 ppm (RRSCO 52 ppm) and total xylenes with a maximum concentration of 180 ppm (RRSCO 100 ppm).

One VOC, 1,3,5- trimethylbenzene (mesitylene), was detected at concentrations exceeding the PGSCO with a maximum concentration of 120 ppm (PGSCO 8.4 ppm).

SVOCs detected sitewide at concentrations exceeding the PGSCOs occurred for two constituents which include benzo(a)anthracene at a maximum concentration of 6.6 ppm (PGSCO 1.0 ppm) and benzo(b)fluoranthene at a maximum concentration of 8.2 ppm (PGSCO 1.7 ppm).

Four SVOCs were detected at concentrations exceeding RRSCOs which include: benzo(a)pyrene at a maximum concentration of 6.8 ppm (RRSCO 1.0 ppm), chrysene at a maximum concentration of 6.4 ppm (RRSCO 3.9 ppm), dibenz(a,h)anthracene at a maximum concentration of 1.0 ppm (RRSCO 0.33 ppm), and indeno(1,2,3- cd)pyrene at a maximum concentration of 4.6 ppm (RRSCO 0.5 ppm).

Six metals were detected sitewide at concentrations exceeding RRSCOs and include: arsenic which was detected at a maximum concentration of 19.9 ppm (RRSCO 16 ppm), barium with a maximum concentration of 785 ppm (RRSCO 400 ppm), cadmium with a maximum concentration of 7.66 ppm (RRSCO 4.3 ppm), copper with a maximum concentration of 1,390 ppm (RRSCO 270 ppm), lead with a maximum concentration of 1,660 ppm (RRSCO 400 ppm), and mercury with a maximum concentration of 68 ppm (RRSCO 0.81 ppm).

One metal, manganese, was detected at concentrations exceeding the PGSCOs with a maximum concentration of 3,290 ppm (PGSCO 2,000 ppm).

Perfluorooctane sulfonic acid (PFOS) was detected in eight soil sample above unrestricted use soil cleanup objectives (UUSCOs) and in seven soil samples above PGSCOs with a maximum

concentration of 0.00293 parts per billion (ppb) compared to the PGSCO of 0.001 ppb. Perflurorooctanoic acid (PFOA) was not detected at concentrations exceeding the PGSCO.

There were no herbicides detected in soil at concentrations exceeding applicable SCOs.

Pesticides detected in soil did not exceed RRSCOs.

Data do not indicate that there are off-site impacts in soil related to this site.

Groundwater: Groundwater sample results were compared to the NYS Ambient Water Quality Standards and Guidance Values (groundwater SCGs).

Two VOCs exceeding applicable groundwater SCGs occurred in samples collected from three out of 11 groundwater monitoring wells across the site including 1,2,4,5-tetramethylbenzene at a maximum concentration of 8.9 ppb (SCG 5 ppb) and 1,3,5- trimethylbenzene at a maximum concentration of 11 ppb (SCG 5 ppb).

Three SVOCs exceeding groundwater SCGs occurred in samples collected from two out of 11 groundwater monitoring wells across the site including benzo(a)anthracene at a maximum concentration of 0.03 ppb (SCG 0.002 ppb), benzo(b)fluoranthene at a maximum concentration of 0.03 ppb (SCG 0.002 ppb), and phenol at a maximum concentration of 2.7 (SCG 1.0 ppb).

Five metals in both the dissolved phase and in total exceeded groundwater SCGs throughout the site which include: iron at a maximum concentration of 2,220 ppb (dissolved) and 8,330 ppb (total) (SCG 300 ppb), magnesium at a maximum concentration of 52,400 ppb (dissolved) and 52,600 ppb (total) (SCG 3,000 ppb), manganese at a maximum concentration of 13,190 ppb (dissolved) and 13,850 ppb (total) (SCG 300 ppb), selenium at a maximum concentration of 14.4 ppb (dissolved) and 14.6 ppb (total) (SCG 10 ppb), and sodium at a maximum concentration of 208,000 ppb (dissolved) and 220,000 ppb (total) (SCG 20,000 ppb).

PFOS was detected in samples collected from three of the 11 groundwater monitoring wells at concentrations above the applicable groundwater SCG with a maximum detection of 0.0124 ppb (SCG 0.0027 ppb). PFOA and 1,4-Dioxane were not detected in the groundwater monitoring well samples above applicable groundwater SCGs.

No pesticides, herbicides, or PCBs were detected at concentrations above groundwater SCGs.

Data does not indicate that there are off-site impacts in groundwater related to this site.

Soil Vapor: Various petroleum VOCs were detected sitewide in the soil vapor samples, most notably hexane at a maximum concentration of 916 micrograms per cubic meter ( $\mu g/m3$ ). Several chlorinated VOCs were detected in the soil vapor samples, most notably tetrachloroethylene at a maximum concentration of 564  $\mu g/m3$ .

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

### 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*.

The site is completely fenced which restricts public access. Persons who enter the site may come into contact with contaminants in soil by digging below surface soil or otherwise disturbing soil beneath the packed gravel surface. Contaminated groundwater at the site is not used for drinking or other purposes, since the site is served by a public water supply that obtains its water from a source not affected by site 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. Soil vapor intrusion is not a current concern on-site because the site is vacant; however, the potential exists for the inhalation of site contaminants due to soil vapor intrusion in any future on-site buildings. Environmental sampling indicates that soil vapor intrusion 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.

#### **RAOs for Environmental Protection**

Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

#### <u>Soil</u>

#### **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.

#### <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: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Remedial action work plan (RAWP). The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 2: Restricted use with generic soil cleanup objectives remedy.

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

The elements of the selected remedy, as shown in Figure 3, 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;
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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 shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or the 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<sup>TM</sup> (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC

accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable 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

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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

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4. Vapor Mitigation System

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

## 5. Institutional Controls

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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, commercial use, or industrial 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 County DOH; and

• require compliance with the NYSDEC approved Site Management Plan.

6. Site Management Plan

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

1. 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 Control: The environmental easement discussed in remedy element 5 above.

Engineering Control: The sub-slab depressurization system discussed in remedy element 4 above. 2. 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 no limited to:

• descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;

• procedures for operating and maintaining the engineering control;

• compliance inspection of engineering control 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;
- providing the NYSDEC access to the site and O&M records; and

• the steps necessary for the periodic reviews and certification of the institutional and engineering controls.

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



Path: \\langan.com\data\NYC\data0\170784003\Project Data\ArcGIS\APRX\170784003\170784003.aprx Date: 11/2/2023 User: mgeorgalas Time: 1:24 PM



Legend

Approximate Site Boundary

<u>Notes:</u> 1. Aerial imagery provided through Langan's subscription to Near Map, dated 04/16/2023.

TE PLAN
Project No.
170784003
Date
11/2/2023
Scale
1"=80'
Drawn By
MG



# Legend

Approximate Site Boundary
 Excavation to about 2 feet bgs
 Excavation to about 4 feet bgs
 Excavation to about 5 to 5.5 feet bgs
 Excavation to about 6 feet bgs
 Excavation to about 8 feet bgs
 Excavation to about 9 feet bgs



	Project No. 170784003	Figure	
RNATIVE 2	Date 8/2/2024	3	
<b>CLEANUP</b>	Scale 1"=80'	•	angan
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