Atlantic Chestnut - Lot 3 Brownfield Cleanup Program Brooklyn, Kings County Site No. C224236 November 2024



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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

Atlantic Chestnut - Lot 3 Brownfield Cleanup Program Brooklyn, Kings County Site No. C224236 November 2024

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

This document presents the remedy for the Atlantic Chestnut - Lot 3 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 Atlantic Chestnut - Lot 3 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 redevelopment; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis 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 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 contaminant source areas, including:

- any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination;
- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soil with visual waste material or non-aqueous phase liquid; and
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards.

Excavation and off-site disposal of all on-site soils which exceed restricted residential SCOs, as defined by 6 NYCRR Part 375-6.8, in the upper 15 ft. Deeper excavations to depths ranging from 17 to 25 feet below grade will be conducted to remove additional source material in the northern portion of the site. If a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 27,000 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, and in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

## 3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.

#### 4. Vapor Mitigation

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

#### 5. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3)
- allows 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;
- restricts 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
- requires compliance with the NYSDEC approved Site Management Plan.

## 6. Site Management Plan

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

- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
  - Institutional Controls: The Environmental Easement discussed in Remedy Element 5.
  - Engineering Controls: The vapor mitigation system discussed in Remedy Element 4.

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 groundwater use restrictions;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Contingent Remedy Element 7 below will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
  - monitoring of soil vapor, groundwater, and indoor air to assess the performance and effectiveness of the remedy; and
  - a schedule of monitoring and frequency of submittals to NYSDEC.
- c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:

- procedures for operating and maintaining the SSDS; and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

#### Contingent Track 4 Remedy

In the event that Track 2 restricted residential use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 4 restricted residential cleanup.

#### 7. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used, it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

#### **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.

November 8, 2024

Date

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Jane H. O'Connell Regional Remediation Engineer, Region 2

# **DECISION DOCUMENT**

Atlantic Chestnut - Lot 3 Brooklyn, Kings County Site No. C224236 November 2024

## SECTION 1: SUMMARY AND PURPOSE

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

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

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

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

NYSDEC seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by NYSDEC in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

DECInfo Locator - Web Application https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224236

Brooklyn Public Library - Cypress Hills Branch 1197 Sutter Avenue Brooklyn, NY 11208 Phone: (718) 277-6004 Brooklyn Community Board 5 127 Pennsylvania Avenue, 2nd Floor Brooklyn, NY 11207 Phone: (718) 819-5487

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

## SECTION 3: SITE DESCRIPTION AND HISTORY

Location:

The site is located at 275 Chestnut Street in an urban area in the East New York neighborhood of Brooklyn. The site is approximately 52,360 square feet and is denoted on New York City tax maps as Block 4143, Lot 3. The rectangular-shaped site is bounded to the north by the Atlantic Chestnut - Lot 2 (C224235) and Atlantic Chestnut - Lot 1 (C224234) followed by Fulton Street; to the east by Euclid Avenue, followed by residential properties; to the south by Atlantic Avenue and Long Island Railroad tracks; and to the west by Chestnut Street, followed by commercial and residential properties.

## Site Features:

The site is comprised of a concrete and asphalt-paved vacant lot with former truck loading bays on the central portion. The site formerly consisted of a series of vacant, fire-damaged factory buildings that extended to the north-adjacent properties. The buildings were demolished between July and December 2016.

## Current Zoning and Land Use:

The site is currently vacant and is zoned as M1-4 for light manufacturing with an R8A residential overlay. The surrounding area is developed with residential, commercial, manufacturing, transportation, and industrial uses.

## Past Use of the Site:

The site was developed for industrial and manufacturing uses, including the Columbia Machine Works and Malleable Iron Company, the Columbia Cable and Electric Corporation, Blue Ridge Farms, Inc., and Chloe Foods Corp. between 1908 and 2012. Other previous uses include blacksmithing and stamping, a brass foundry, wood working, a blacksmith, a machine shop, tank and engine rooms, an iron works, wire braiding, and cable manufacturing.

Site Geology and Hydrogeology:

Surface topography at the Site is generally level and lies at an elevation of approximately 38 feet above mean sea level. Historic fill materials (including sand, gravel, silt, ash, slag, concrete, and asphalt) exist from just below the surface to approximately 3 to 5 feet below grade surface (bgs). The fill is underlain by apparent native sand and gravel to approximately 40 feet bgs. Bedrock was not encountered during any of the investigations conducted at the site. The surrounding area slopes down to the south. Groundwater was encountered approximately 30 feet below grade and flows to the south.

A site location map is attached as Figure 1.

# SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, 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(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Volunteer(s) does/do not have an obligation to address off-site contamination. NYSDEC 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 Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Volunteer does not have an obligation to address off-site contamination. NYSDEC 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.

NYSDEC has sought to identify any parties (other than the Volunteer) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). NYSDEC has attempted to 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, NYSDEC 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 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 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:

trichloroethene (TCE)	vinyl chloride
tetrachloroethene (PCE)	arsenic
dichloroethene (cis-1,2-)	mercury

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.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

## SVE and Excavation IRM

A soil-vapor extraction system (SVES) was installed along the perimeter of the site to prevent further off-site migration of VOCs. The SVES applies a negative pressure (vacuum) to the subsurface to recover and treat vapor at the site boundaries. Recovered vapors are directed to an above-ground vapor treatment system, consisting of granulated activated carbon (GAC), and subsequently discharged to the atmosphere in accordance with 6 New York Code of Rules and Regulations (NYCRR) Part 212. The SVES is currently in operation. The SVES will be dismantled during remedial activities when the lot is redeveloped. The SVES installation and startup were documented in a Construction Completion Report (CCR) dated March 2023.

Additionally, a section along the northern (Pedestrian Plaza) portion of the site was excavated to remove chlorinated solvent impacted soil and to facilitate remedial activities on the adjacent property. The remedial excavation completed for the Pedestrian Plaza portion of the site is documented in an IRM CCR, which will be appended to the FER.

## 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.

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides. Soil vapor was analyzed for VOCs. Based on

the investigation conducted to date, the primary contaminants of concern for the site include chlorinated solvent-related VOCs and metals in soil, and chlorinated VOCs in soil vapor.

Soil - VOCs were found at concentrations exceeding the applicable restricted residential soil cleanup objectives (RRSCOs) and protection of groundwater soil cleanup objectives (PGWSCOs) including trichloroethene (TCE) at a maximum concentration of 570 parts per million, or ppm (RRSCO is 21 ppm, PGSCO is 0.47 ppm) and tetrachloroethene (PCE) at 3 ppm (PGWSCO is 1.3 ppm). These contaminants were detected in soil borings located in the northern and southern portion of the site at depths ranging from grade to 21 feet (bgs). Metals found in exceedance of their applicable RRSCOs including arsenic at 21.2 ppm (RRSCO is 16 ppm) and mercury at 7.1 (RRSCO is 0.81). These metals were found in the central and northeastern portions of the site at 2 to 5 feet bgs.

No SVOCs, PCBs or pesticides were detected at concentrations exceeding RRSCOs. PFAS compounds were not sampled in soil. The remedial investigation was conducted in 2017, prior to NYSDEC's requirement to sample soil for PFAS.

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

Groundwater - In groundwater, VOCs including PCE, TCE and vinyl chloride were detected at concentrations above their respective NYS Ambient Water Quality Standards and Guidance Values (AWQSGVs). During the original RI in 2017 PCE was detected at a maximum concentration of 10.8 parts per billion, or ppb (AWQSGV is 5 ppb), TCE at 1,070 ppb (AWQSGV is 5 ppb), and vinyl chloride at 203 ppb (AWQSGV is 2 ppb). During a subsequent groundwater pre-design investigation (PDI) conducted in 2024, the maximum detections of these compounds was PCE at 8.7 ppb and vinyl chloride at 80 ppb. TCE was not detected in groundwater during the PDI. The compounds 1,4-dioxane was detected at a maximum concentration of 3.4 ppb (AWQSGV is 0.35 ppb), perfluorooctanesulfonic acid (PFOS) at a maximum concentration of 29.9 parts per trillion, or ppt (AWQSGV is 2.7 ppt), and perfluorooctanoic acid (PFOA) at a maximum concentration of 52 ppt (AWQSGV is 6.7 ppt).

No SVOCs, PCBs or pesticides were detected exceeding AWQSGVs. Data does not indicate any off-site impacts in groundwater related to the site.

Soil vapor - VOCs were detected at elevated concentrations in on-site soil vapor samples throughout the site. Cis-1,2-dichloroethene was detected at 1,150 micrograms per cubic meter ( $\mu$ g/m3) on the southwestern portion of the site. The highest concentrations of PCE and TCE were 8,070 ug/m3 and 7,690 ug/m3 collected from the southeastern and southwestern site boundaries, respectively. PCE and TCE appear to be related to historic manufacturing operations at the site. Elevated concentrations are present at the site boundaries, indicating a potential for off-site migration.

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

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

Access is restricted by a fence. People who enter the site may come into contact with site-related soil and groundwater contamination if they dig below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into buildings and affect the indoor air quality. This 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. There are no occupied buildings on the site so soil vapor intrusion is not a current concern, however environmental sampling indicates soil vapor intrusion from site contamination is a potential concern both off-site and for any future on-site development and occupancy.

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

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

## **Groundwater**

## **RAOs for Public Health Protection**

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

## **RAOs for Environmental Protection**

• 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: ELEMENTS OF THE SELECTED REMEDY

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

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

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

The elements of the selected remedy, as shown in Figures 2, 3, 4, and 5 are as follows:

## 1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
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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 redevelopment; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise<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 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.

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- soil with visual waste material or non-aqueous phase liquid; and
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- allows 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;
- restricts 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
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This plan includes, but may not be limited to:

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- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Contingent Remedy Element 7 below will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
  - monitoring of soil vapor, groundwater, and indoor air to assess the performance and effectiveness of the remedy; and
  - a schedule of monitoring and frequency of submittals to NYSDEC.
- c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:

- procedures for operating and maintaining the SSDS; and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

#### Contingent Track 4 Remedy

In the event that Track 2 restricted residential use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 4 restricted residential cleanup.

### 7. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used, it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.



mveilleu: ATLANTIC CHESTNUT - LOT 3/Technical/GIS and Graphics/hazmat/RAWP/12184 Fig 1 Site Loc Map.mxd3/4/2024 9:25:53 AM AKRF











ND\12184 Fig 12 Pi ATLANTIC CHESTNUT - LOT