DECISION DOCUMENT

Former Garone Bros Auto Service Center Brownfield Cleanup Program Brooklyn, Kings County Site No. C224338 February 2024



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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Garone Bros Auto Service Center Brownfield Cleanup Program Brooklyn, Kings County Site No. C224338 February 2024

Statement of Purpose and Basis

This document presents the remedy for the Former Garone Bros Auto Service Center 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 Former Garone Bros Auto Service Center 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

DECISION DOCUMENT February 2024

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), SiteWiseTM (available in the Sustainable Remediation Forum [SURF] library) or similar Department accepted tool. Water consumption, greenhouse gas emissions, renewable and nonrenewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

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

2. Excavation

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 ranging from depths of 4 to 12 feet below grade. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy. 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 NYSDEC, submit the sample results and, in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

Approximately 935 cubic yards of contaminated soil will be removed from the site, including the upper 4 feet of soil, site-wide, and individual hot spots that range from 7 feet below ground surface (bgs) to 12 feet bgs. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

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 NYCRRR Part 375-6.7(d) will be brought in to replace the excavated soil 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.

5. Local Institutional Controls

If no Environmental Easement (EE) or Site Management Plan (SMP) is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOHMH 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 (EE) or (SMP) is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then an EE and SMP 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 (COC).

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 4 restricted residential cleanup.

Contingent Remedial Elements

6. **Cover System**

A site cover will be required in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs), to allow for future restricted residential use of the site. 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,

DECISION DOCUMENT February 2024 Former Garone Bros Auto Service Center, Site No. C224338 Page 3 sidewalks, building foundations and building slabs.

7. 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 NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential 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 NYSDEC approved SMP.

8. 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:
 - <u>Institutional Controls:</u> The EE discussed in Paragraph 7 above.
 - Engineering Controls: The Cover System discussed in Paragraph 6.

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 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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 6 above 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;
- 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 NYSDEC;
 - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

DECISION DOCUMENT February 2024

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 14, 2024

Date

R. Scott Deyette, Director Remedial Bureau B

L. Siatt Degret

DECISION DOCUMENT February 2024

DECISION DOCUMENT

Former Garone Bros Auto Service Center Brooklyn, Kings County Site No. C224338 February 2023

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 repositories:

DECInfo Locator - Web Application https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224338

Brooklyn Public Library - Cypress Hills 1197 Sutter Avenue at Crystal Street Brooklyn, NY 11208 Phone: (718) 277-6004

DECISION DOCUMENT

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Site Location:

The 0.23-acre site is located at 352-362 Shepherd Avenue in the East New York neighborhood of Brooklyn on the west side of Shepherd Avenue between Liberty Avenue and Glenmore Avenue. It is identified as Brooklyn Block 3988, Lot 28. The site is bounded by residential homes to the north and south, Shepherd Avenue followed by a residential home and a garage/parking area to the east, and residential apartments to the west.

Site Features:

The site is a rectangular shaped lot that was formerly occupied by a one-story warehouse/garage building encompassing the entire site footprint with a partial cellar located in the southwest corner of the property. The site is currently vacant and undeveloped.

Current Zoning and Land Use:

The site is zoned R6 for residential use. The surrounding properties are currently used for residential purposes.

Past Land Use:

The site was developed in the late 1880s with several dwellings. In the early 1900s, a toy animal factory occupied the site and by the late 1920s, the previous site buildings were razed and the site began operating as a garage and continued to do so until the late 1960s/early 1970s. From the late 1970s through the present, the site was primarily used for auto-related purposes including an auto repair shop and service center, used car sales shop, and a towing center. Site buildings have been demolished and the site is currently vacant.

Site Geology and Hydrogeology:

The stratigraphy of the site, from the surface down, consists of 0-5 feet of urban fill material, comprised of brown silty sand with some fragments of concrete, brick, and asphalt underlain by brown to orange-brown well graded native sand to the boring terminus depth of 25 ft bgs. The

average depth to groundwater is approximately 22 feet below grade. Groundwater is inferred to flow from south to north. There are no nearby waterbodies.

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, an alternative 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) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

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

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The 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: **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. 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: 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)anthracene pyrene
benzo(a)pyrene arsenic
benzo(b)fluoranthene barium
benzo(g,h,i)perylene cadmium
benzo(k)fluoranthene copper
chrysene lead
dibenz[a,h]anthracene mercury

fluoranthene dimethyl phthalate

indeno(1,2,3-cd)pyrene chrysene

phenanthrene tetrachloroethene (PCE)

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

- groundwater
- soil

DECISION DOCUMENT February 2024

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:

A site-wide investigation was conducted to delineate contamination in soil, groundwater, and soil vapor. Soil and groundwater samples 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 investigations conducted to date, the primary contaminants of concern are SVOCs and metals in soil.

Soil:

Various SVOCs were detected at concentrations exceeding their respective unrestricted use soil cleanup objectives (UUSCOs). The highest concentrations were located in a shallow soil sample (the upper 6 inches) and decreased by one to two orders of magnitude elsewhere and in deeper soils at the site. SVOC exceedances in soil include: benzo(a)anthracene up to 270 parts per million (ppm) (UUSCO of 1 ppm), benzo(a)pyrene up to 260 ppm, (UUSCO of 1 ppm), benzo(b)fluoranthene up to 280 ppm (UUSCO of 1 ppm), benzo(ghi)perylene up to 140 ppm (UUSCO of 100 ppm), benzo(k)fluoranthene up to 62 ppm (UUSCO of 0.8 ppm), chrysene up to 260 ppm (UUSCO of 1 ppm), dibenzo(a,h)anthracene up to 31 ppm (UUSCO of 0.33 ppm), dibenzofuran up to 8 ppm (UUSCO of 7 ppm), fluoranthene up to 560 ppm (UUSCO of 100 ppm), indeno(1,2,3-cd)pyrene up to 170 ppm (UUSCO of 0.5 ppm), phenanthrene up to 270 ppm (UUSCO of 100 ppm), phenol up to 0.55 ppm (UUSCO of 0.33 ppm), pyrene up to 480 ppm (UUSCO of 100 ppm), and 3-methylphenol/4-methylphenol up to 1.2 parts per million (UUSCO of 0.33 ppm).

Metals detected at concentrations exceeding UUSCOs include: arsenic up to 36.6 ppm (UUSCO of 13 ppm), barium up to 1,060 ppm (UUSCO of 350 ppm), cadmium up to 4.42 ppm (UUSCO of 2.5 ppm), copper up to 25,100 ppm (UUSCO of 50 ppm), lead up to 1,840 ppm (UUSCO of 63 ppm), mercury up to 30.2 ppm (UUSCO of 0.18 ppm), selenium up to 5.01 ppm (UUSCO of 3.9 ppm), silver up to 7.66 ppm (UUSCO of 2 ppm), and zinc up to 1,810 ppm (UUSCO of 109.81 ppm).

DECISION DOCUMENT
Former Garone Bros Auto Service Center, Site No. C224338
Page 10

No VOCs, PCBs, or pesticides were detected above their respective UUSCOs and no PFAS were detected above their unrestricted use guidance values.

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

Groundwater:

The VOC tetrachloroethene (PCE) was detected up to a concentration of 5.2 parts per billion (ppb), slightly above the Class GA Ambient Water Quality Standard and Guidance Value (AWQSGV) of 5 ppb. The SVOC dimethyl phthalate was detected in all four monitoring wells with concentrations ranging from 60 ppb up to 100 ppb, exceeding the AWQSGV of 5 ppb. Additional SVOCs were detected in a single monitoring well but the data were flagged as estimated concentrations. This well also had high turbidity and the SVOC detected are likely due to entrained sediment and do not represent contamination in on-site groundwater.

Aside from naturally occurring minerals such as sodium and manganese, the only dissolved metals detected above its respective AWQSGV was antimony up to 7.84 ppb (AWQSGV of 3 ppb).

PFAS detected at concentrations exceeding their respective AWQSGVs include perfluorooctanoic acid (PFOA) up to 59.6 parts per trillion (ppt) (AWQSGV is 6.7 ppt) and perfluorooctanesulfonic acid (PFOS) up to 76.4 ppt (AWQSGV is 2.7 ppt). 1,4-Dioxane was not detected above the AWQSGV.

No PCBs or pesticides were detected above their respective AWQSGVs.

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

Soil Vapor:

The following chlorinated VOCs were detected in on-site soil vapor: PCE up to 35.5 micrograms per cubic meter (µg/m³), trichloroethene (TCE) up to 2.26 µg/m³, and methylene chloride up to 3.28 µg/m³. Additionally, some petroleum-related VOCs, such as benzene, toluene, ethylbenzene and xylenes (BTEX) were detected throughout the site with a maximum concentration of 270.8 $\mu g/m^3$.

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*.

The site is secured with a fence and people will not come in contact with site-related soil and groundwater contamination unless 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. As the site is vacant, the inhalation of site related contaminants due to soil vapor intrusion does not represent a current concern, however it may be a concern for future buildings. Environmental sampling indicates soil vapor intrusion from site contaminants is not a concern for off-site buildings..

Summary of the Remediation Objectives 6.5:

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.

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 Soil Vapor Intrusion 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;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

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

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

2. Excavation

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 ranging from depths of 4 to 12 feet below grade. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy. 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 NYSDEC, submit the sample results and, in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

Approximately 935 cubic yards of contaminated soil will be removed from the site, including the upper 4 feet of soil, site-wide, and individual hot spots that range from 7 feet below ground surface (bgs) to 12 feet bgs. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

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 NYCRRR Part 375-6.7(d) will be brought in to replace the excavated soil 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.

5. Local Institutional Controls

If no Environmental Easement (EE) or Site Management Plan (SMP) is needed to achieve soil,

groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOHMH 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 (EE) or (SMP) is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then an EE and SMP 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 (COC).

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 4 restricted residential cleanup.

Contingent Remedial Elements

6. Cover System

A site cover will be required in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs), to allow for future restricted residential use of the site. 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.

7. 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 NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential 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 NYSDEC approved SMP.

8. Site Management Plan

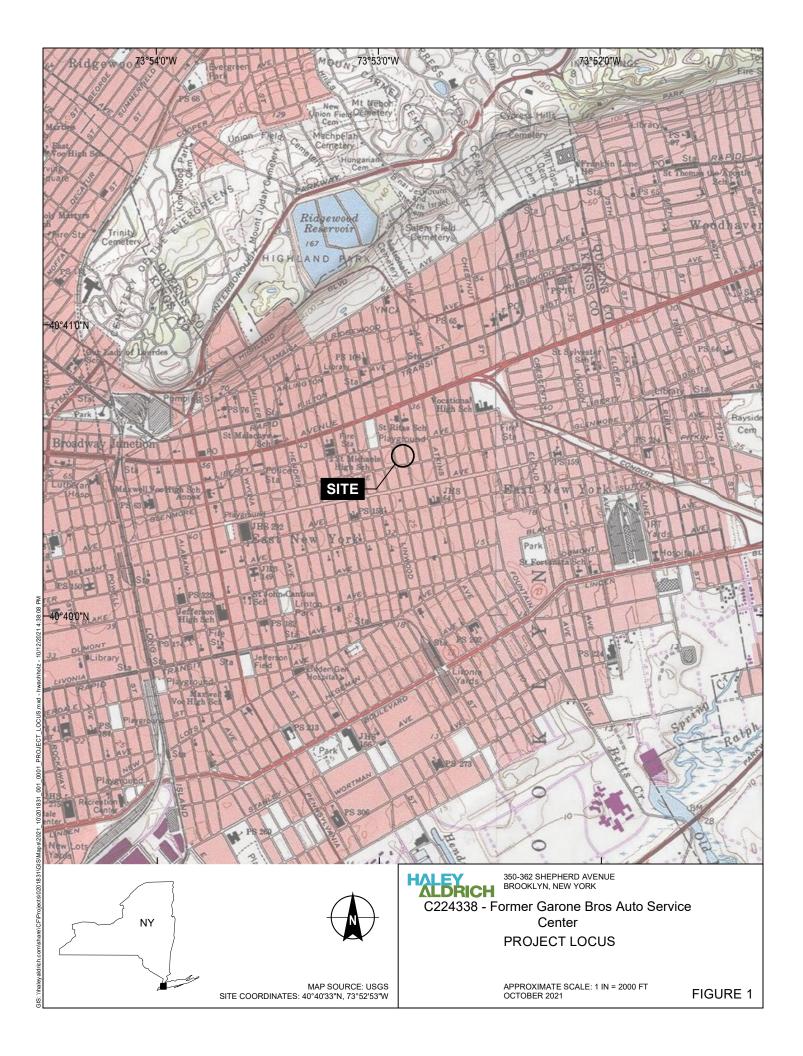
A Site Management Plan is required, which includes the following:

- 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 EE discussed in Paragraph 7 above.
 - Engineering Controls: The Cover System discussed in Paragraph 6.

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 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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 6 above 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;
- 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 NYSDEC;
 - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

DECISION DOCUMENT February 2024 Former Garone Bros Auto Service Center, Site No. C224338 Page 16





LEGEND

SITE BOUNDARY

2022 RI SOIL BORING LOCATION

2021 RI SOIL BORING LOCATION

ALTERNATIVE I/ TRACK 1 REMEDIAL EXCAVATION TO 12 FEET BELOW GROUND SURFACE (10X10 FT AREA CENTERED ON 2022 RI SOIL BORINGS B05, B10, B09, B07 AND 2021 RI SOIL BORING SB-3)

ALTERNATIVE I/ TRACK 1 REMEDIAL EXCAVATION TO 7 FEET BELOW GROUND SURFACE (10X10 FT AREA CENTERED ON SOIL BORINGS B01)

ALTERNATIVE I/ TRACK 1 REMEDIAL EXCAVATION TO 2 FEET BELOW GROUND SURFACE

NOTES

- 1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- 2. ASSESSOR PARCEL DATA SOURCE: NEW YORK STATE GIS
- 3. AERIAL IMAGERY SOURCE: NEARMAP, 10 MARCH 2021





352-362 SHEPHERD AVENUE BROOKLYN, NEW YORK

ALTERNATIVE I CLEANUP PLAN

MAY 2022

FIGURE 2