DECISION DOCUMENT

46-70 McLean Avenue Auto Repair Laundry Site
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360211
April 2025

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

DECLARATION STATEMENT - DECISION DOCUMENT

46-70 McLean Avenue Auto Repair Laundry Site
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360211
April 2025

Statement of Purpose and Basis

This document presents the remedy for the 46-70 McLean Avenue Auto Repair Laundry Site brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 46-70 McLean Avenue Auto Repair Laundry Site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Green Remediation

Green remediation principals and techniques will be implemented to the extent feasible in the 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 gas 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; 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 site management program, to promote implementation of 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(TM) (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 established for the site management activities, as appropriate. Further, progress with respect to green and sustainable remediation metrics will be tracked, and reported in periodic reports, as part of the site management program, and opportunities to further reduce the environmental footprint of the project will be identified as appropriate.

Additionally, the site management program will include an evaluation of the impact of climate change on the project site and the engineering controls. 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 site management program will include measures to minimize the impact of potential identified vulnerabilities.

2. Monitored Natural Attenuation

Remaining groundwater contamination will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and MNA indicators which will provide an understanding of the biological activity breaking down the contamination. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of 5 years. Reports of the attenuation will be provided at 5 years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that In-Situ Chemical Oxidation (ISCO) would be the expected contingency remedial action.

3. Vapor Intrusion Evaluation

As part of the Track 2 Residential use remedy, a soil vapor intrusion evaluation, including sub-slab and indoor air sampling, will be completed once the building is fully constructed. The evaluation will include a provision for implementing actions recommended to address potential exposures related to soil vapor intrusion.

4. Institutional Control

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 the Department 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, commercial, and industrial uses 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 Westchester County DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 4 above.
Engineering Controls: The groundwater monitoring and soil vapor monitoring for Remedy Elements 2 and 3, above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a description 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 buildings on the site, including provisions for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the success of source material removal during the Interim Remedial Measure (IRM) in reducing groundwater contaminant levels;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site as may be required by the Institutional and Engineering Control Plan as discussed in section a. above.

Declaration

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

April 15, 2025
Date

Sarah Saucier
Sarah Saucier, Director
Remedial Bureau C

DECISION DOCUMENT

46-70 McLean Avenue Auto Repair Laundry Site
Yonkers, Westchester County
Site No. C360211
April 2025

SECTION 1: SUMMARY AND PURPOSE

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

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

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

SECTION 2: CITIZEN PARTICIPATION

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

DECInfo Locator - Web Application
https://extapps.dec.ny.gov/data/DecDocs/C360211/

Yonkers Public Library-Riverfront Library
Attn: Anne Campbell
1 Larkin Center
Yonkers, NY 10701
Phone: (914) 375-7940

Receive Site Citizen Participation Information by Email

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Site Location:
The site is 0.87-acre corner lot located between two city parks, Leslie Sutherland Park to the North and Pelton Oval Park to the northeast. McLean Avenue runs along the southern border, and Van Cortlandt Park Avenue runs along the eastern border.

Site Features:
A vacant on-site building covers most of the site. The building interior has been demolished to allow for investigation, remediation as an Interim Remedial Measure (IRM), and stabilizing the exterior walls. The facade of the building and fencing remains around the site. The perimeter of the site is covered by a concrete and asphalt sidewalk and walkway.

The building was vacated in April 2022 by the previous tenants to allow investigation and demolition to begin. The first-floor slab and vapor barrier have been installed. A portion of the second floor is built into the hillside. The portion of the second floor built into the hillside requires a slab and a vapor barrier. Though not required by the Department, vapor extraction points were pre-emptively installed in the first floor of the partially constructed building and are proposed to be installed in the second floor upon completion of the building. Extraction points were installed instead of laterals due to the presence of shallow bedrock and perched groundwater beneath the building slab. A vapor barrier has also been installed beneath both floors of the building.

Current Zoning and Land Use:
The site is located in a Commercial District (CM) zoning district, which allows for commercial use. The CM is consistent with the proposed use as the CM permits use as a self-storage warehouse.

Past Use of the Site:
The site historically operated as an auto repair and service station from 1987 to April 2022 on the first level with various uses since the 1950's (e.g., printing, metal manufacturing, sports manufacturer, laundry). The lower level of the site was separated into eight units in 1956. The second floor was used for heat sealing to customize jerseys, sweatshirts and performance wear. Previously, the area was predominantly inactive storage space which included collectible dolls and toys, frames, leather goods, office supplies, and antiquated printing machines. There was an inactive 5,000-gallon fuel oil underground storage tank in the southeastern portion of the site beneath a ramp. This tank was removed during the IRM conducted in October 2022 and properly closed out per local and state regulations. Documentation is provided in the IRM completion report.

Site Geology and Hydrogeology:
According to a 2018 Phase I and an April 2020 Phase II investigation, bedrock outcrops are located to the north of the site. Geotechnical and subsurface investigations have determined the building was constructed into bedrock, which is present 1 to 5 feet (ft.) below surface grade. Surface grade is 80 to 90 ft. above mean sea level.

Groundwater depth varies across the site from approximately 1 ft. below ground surface (bgs) at the northern/central portion, to approximately 16 ft. bgs in the southeast corner of the site. Groundwater generally flows towards the southwest, to the Hudson River approximately one mile away west of the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative 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) 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, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A 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, and indoor air may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings are installed to sample soil and/or wastes 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
- indoor air
- sub-slab 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 contaminants of concern identified at this site are:

trivalent chromium
hexavalent chromium
mercury
PCB Aroclor 1260
PCB Aroclor 1254
lead
tetrachloroethene (PCE)
xylene (mixed)
naphthalene
4,4-DDT
4,4-DDE
benzene
ethylbenzene
toluene
nickel
zinc
heptane
1,2,4- trimethylbenzene
1,3,5-trimethylbenzene
carbon tetrachloride
hexane

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

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 IRMs have been completed at this site based on conditions observed during the RI.

Soil Removal and Petroleum Tank Removal

Prior to the IRM, compounds that exceeded their Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted-Residential Soil Cleanup Objectives (RRSCOs) in the IRM areas included (maximum concentrations given): trivalent chromium was detected at 720 ppm, exceeding UUSCO of 30 ppm and the RRSCO of 180 ppm; mercury was detected at 1.27 ppm exceeding the UUSCO of 0.18 ppm and the RRSCO of 0.81 ppm. Compounds which exceeded the UUSCOs, but were detected at concentrations below the RRSCOs included: PCBs, specifically, Aroclors 1254 and 1260, were detected at 0.328 parts per million (ppm) and 0.349 ppm, respectively, exceeding the UUSCOs of 0.1 ppm but below the RRSCOs of 1 ppm; hexavalent chromium was detected at 2 ppm above the UUSCO of 1 ppm but below the RRSCO of 110 ppm; nickel was detected at 143 ppm, exceeding the UUSCOs of 30 ppm but below the RRSCO of 310 ppm; lead was detected at 219 ppm exceeding the UUSCOs of 63 ppm but below RRSCO of 400 ppm;

and the pesticides 4,4'-DDE and 4,4'-DDT were detected at 0.0462 ppm and 0.0589 ppm, respectively, exceeding the UUSCOs of 0.0033 ppm but below the RRSCOs of 8.9 ppm and 7.9 ppm, respectively. VOCs detected included: tetrachloroethene (PCE) at 0.67 ppm, below 19 ppm for RRSCO; toluene at 0.0045 ppm, below RRSCO of 100 ppm; n-butylbenzene at 0.0034 ppm, below the RRSCO of 100 ppm; and 1,3,5-trimethlybenzene at 0.042 ppm, below 52 ppm for RRSCO. SVOCs detected included: acenaphthene at 0.490 ppm, below the RRSCO of 100 ppm; fluoranthene at 0.230 ppm, below the RRSCO of 100 ppm; fluorene at 1.1 ppm, below the RRSCO of 100 ppm; chrysene at 0.360 ppm, below the RRSCO of 3.9; phenanthrene at 2.4 ppm, below the RRSCO of 100 ppm; 2-methlynapthalene at 0.95 ppm, exceeding the Residential SCO of 0.41 ppm; and pyrene at 0.720 ppm. below the RRSCO of 100 ppm.

The July 1, 2021 IRM and subsequent October 28, 2022 and February 4, 2025 IRM addendums consisted of excavation and off-site disposal of soil which exceeded the RRSCOs for metals and PCBs from three hotspot areas (approximately 10-foot by 10-foot) to depths ranging from 3 to 4 feet below ground surface. Other components of the IRM included the investigation, removal, and off-site disposal of one 5,000-gallon petroleum storage tank on the southeastern end of the site associated with a historic heating oil boiler and piping. Additionally, five hydraulic lifts and their contents identified during the IRM were pumped out, containerized, tested for PCBs and ultimately removed from the site.

Approximately 200 to 300 cubic yards of contaminated soil was removed from the site. Approximately 200 to 300 cubic yards of clean fill meeting the requirements of 6 NYCRR Part 375- 6.7(d) was brought in to complete the backfilling of the excavation and establish design grades. The intent of the IRM was to meet UUSCOs; however, confirmation samples collected following the IRM activities demonstrated that the IRM achieved RRSCOs but couldn't meet UUSCOs, as documented in the June 2023 Construction Completion Report.

Soil removal

The IRM approved on February 4, 2025, consisted of removal and off-site disposal of soils and bedrock from the 2nd floor and trenching activities, confirmatory samples for disposal, and documentation for imported fill. These activities will be documented in the Final Engineering Report (FER). Figure 2 shows the IRM excavation areas, soil vapor extraction points, and soil vapor monitoring points.

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.

Soil and groundwater samples were analyzed for VOCs, SVOCs, PCBs, pesticides, metals, cyanide, and per-and poly fluoroalkyl substances (PFAS) and 1,4-dioxane. Soil vapor samples were analyzed for VOCs.

The primary contaminants of concern at the site are petroleum-related VOCs and SVOCs in groundwater and VOCs in soil vapor. Metals, pesticides, and polychlorinated biphenyls (PCBs) are present in site-wide soils but not in groundwater.

Soil - Following the completion of the on-site IRM several constituents in soil were identified at concentrations that exceeded the UUSCOs but were below the intended RRSCOs with the exception of one exceedance of the RRSCO for lead at 572 ppm. It was determined this area could not be removed due to the presence of the northern first floor retaining wall and abundance of bedrock.

The following is a list of those constituents and the maximum exceedances remaining following the excavation IRM: Trivalent chromium detected at 94 ppm versus UUSCO of 30 ppm and below the RRSCO of 180 ppm; nickel was detected at 59.8 ppm versus RRSCO of 310 ppm; lead was detected at 572 ppm versus UUSCO of 63 ppm and the RRSCO of 400 ppm; mercury was detected at 0.75 ppm versus UUSCO 0.18 ppm and below the RRSCO of 0.81 ppm.

VOCs, SVOCs, pesticides and PCBs were not detected above the UUSCOs following the IRM activities.

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

Groundwater - Groundwater samples were collected from before the IRM and after the IRM. No metals, PCBs or pesticides were detected in filtered or unfiltered groundwater samples in exceedance of groundwater standards except for iron, manganese, and sodium. Iron, manganese, and sodium appear to be background levels with no distinction between upgradient and downgradient monitoring wells. These are naturally occurring or attributable to road salt.

VOCs and SVOCs were detected above the groundwater standards as noted: benzene was detected at 7.4 ppb and 4.6 ppb exceeding the standard of 1 ppb; toluene was detected at 48 ppb and 17 ppb exceeding the standard of 5 ppb; and ethylbenzene was detected at 300 ppb exceeding the standard of 5 ppb. Total xylenes were detected at 1400 ppb exceeding the standard of 5 ppb. 1,2,4-trimethlybenezene was detected up to 270 ppb and 1,3,5-trimethlybenezene was detected up to 110 ppb exceeding standards of 5 ppb for both. For SVOCs, naphthalene was detected at 83 ppb exceeding the standard of 10 ppb. These concentrations were detected in the area of the former UST following the UST removal activities.

For PFAS, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported at concentrations of up to 78.8 and 8.26 parts per trillion (ppt), respectively,

exceeding the 6.7 ppt and 2.7 ppt groundwater quality guidance values. 1,4-dioxane was not detected.

Groundwater contamination is not migrating off-site. Samples collected from groundwater wells installed directly off-site and downgradient of the former UST area do not exhibit exceedances for VOCs or SVOCs, or any petroleum products.

Sub-Slab Soil Vapor and Indoor Air - Prior to the IRM, a total of nine sub-slab vapor, four indoor air, and two ambient air samples were collected on-site from within the building and outside and analyzed for VOCs and SVOCs.

Primarily petroleum related contaminants were detected in the sub-slab vapor samples. PCE was detected in all nine sub-slab vapor samples collected with a maximum detection of 368 micrograms per cubic meter (ug/m3). PCE was detected in all four indoor air samples collected with a maximum detection of 1.28 ug/m3. Other VOCs detected in sub-slab vapor samples collected included carbon tetrachloride at 10 ug/m3, cyclohexane at 190,000 ug/m3, ethylbenzene at 13,000 ug/m3, n-heptane at 300,000 ug/m3, n-hexane at 280,000 ug/m3, o-xylene at 4,300 ug/m3, m & p xylene at 22,000 ug/m3, and toluene at 4,500 ug/m3. Heptane was detected in the indoor air sample collected near the petroleum tank ramp at 1,320 ug/m3. Toluene was detected at 35.4 ug/m3 in indoor air

As detailed in section 6.2, based on the concentrations in the soil vapor intrusion samples, a post-remediation soil vapor intrusion evaluation is required during site management. Based on the data obtained to date, no off-site soil vapor impacts are expected.

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.*

Since the site is fenced and covered by asphalt or concrete, people will not come into contact with site-related soil and groundwater contamination unless they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Soil vapor intrusion sampling in the original onsite building identified impacts in indoor air quality in the on-site building. In addition, sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

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 Track 2: Restricted residential use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Post-IRM Groundwater Monitored Natural Attenuation with Soil Vapor Extraction Points -Site Management remedy.

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

1. Green Remediation

Green remediation principals and techniques will be implemented to the extent feasible in the 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 gas 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; 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 site management program, to promote implementation of 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(TM) (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 established for the site management activities, as appropriate. Further, progress with respect to green and sustainable remediation metrics will be tracked, and reported in periodic reports, as part of the site management program, and opportunities to further reduce the environmental footprint of the project will be identified as appropriate.

Additionally, the site management program will include an evaluation of the impact of climate change on the project site and the engineering controls. 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 site management program

will include measures to minimize the impact of potential identified vulnerabilities.

2. Monitored Natural Attenuation

Remaining groundwater contamination will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and MNA indicators which will provide an understanding of the biological activity breaking down the contamination. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of 5 years. Reports of the attenuation will be provided at 5 years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that In-Situ Chemical Oxidation (ISCO) would be the expected contingency remedial action.

3. Vapor Intrusion Evaluation

As part of the Track 2 Residential use remedy, a soil vapor intrusion evaluation, including sub-slab and indoor air sampling, will be completed once the building is fully constructed. The evaluation will include a provision for implementing actions recommended to address potential exposures related to soil vapor intrusion.

4. Institutional Control

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 the Department 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, commercial, and industrial uses 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 Westchester County DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 3 above.

Engineering Controls: The groundwater monitoring and soil vapor monitoring for Remedy Elements 2 and 3, above.

This plan includes, but may not be limited to:

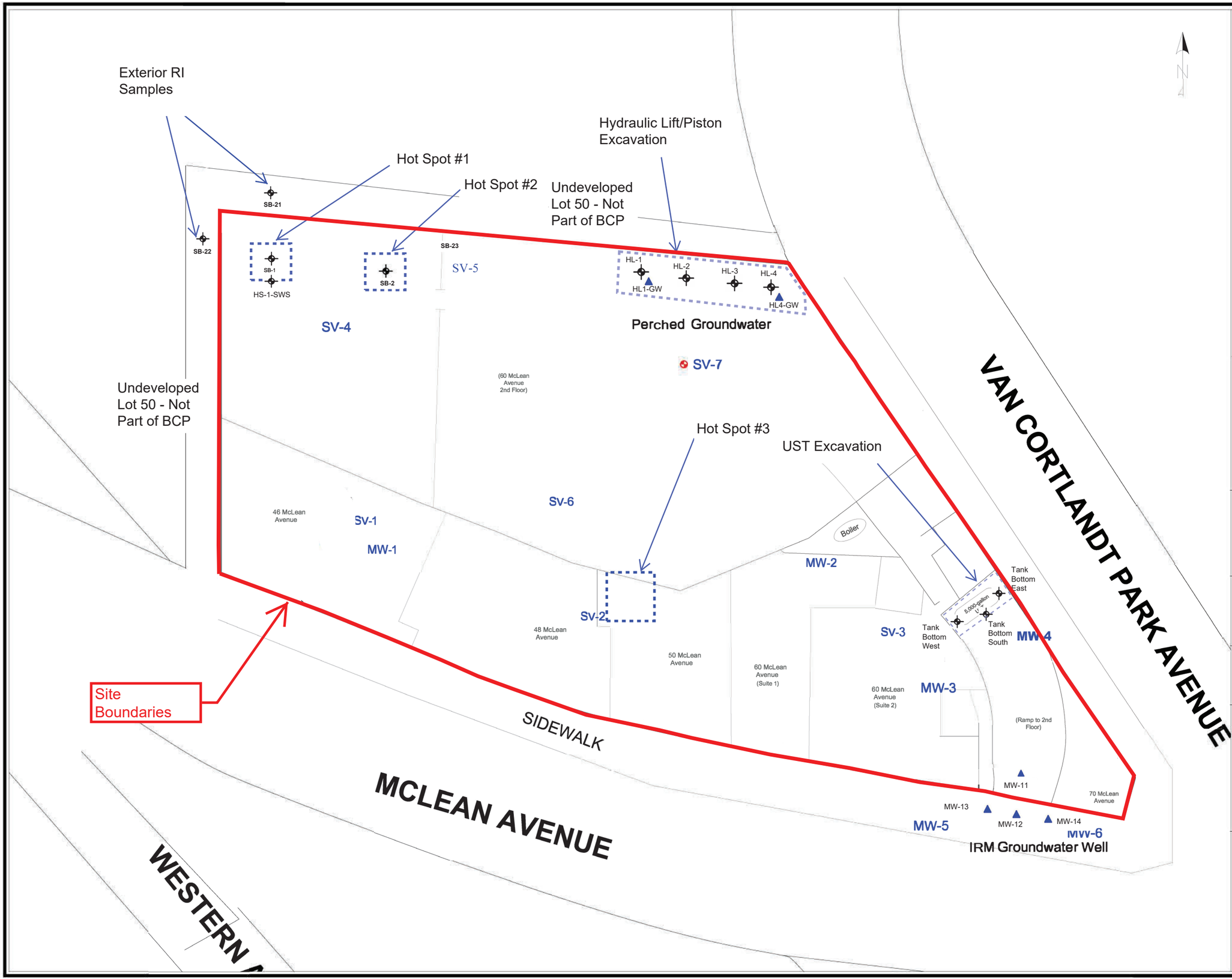
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a description of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings on the site, including provisions for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the success of source material removal during the Interim Remedial Measure (IRM) in reducing groundwater contaminant levels;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site as may be required by the Institutional and Engineering Control Plan as discussed in section a. above.


N
Figure 1: Site Location
Site Boundaries
0.87 acres
C360211
46-70 McLean Avenue
Auto Repair Facility
Van Cortlandt
Park Avenue
Mclean Avenue
Western Avenue
Cornell
Avenue
Eastern Avenue
Randolph Street
0 40 80 Feet

Figure 2: IRM Remedy



LEGEND:

- Soil Boring Sampling Location
- Groundwater Sample Location

SV-3: Proposed Soil Vapor Location

MW-1: Proposed Groundwater Wells

NOTES:

0 25 50 Feet

IRM SAMPLE LOCATION MAP

60 McLean Avenue
Yonkers, New York

Plate No: 11

PROJECT NO.	15514-01
DESIGNED BY:	AK
DRAWN BY:	AK
CHECKED BY:	CC
DATE:	06/13/2022
SCALE:	SEE ABOVE
REVISIONS	

IMPACT ENVIRONMENTAL CLOSURES, INC.

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