

DECISION DOCUMENT

Kimball Residences
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360141
July 2018



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

DECLARATION STATEMENT - DECISION DOCUMENT

Kimball Residences
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360141
July 2018

Statement of Purpose and Basis

This document presents the remedy for the Kimball Residences site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Kimball Residences 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.

2. Excavation

Excavation and off-site disposal of all on-site soils above bedrock which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately 22,440 cubic yards of contaminated soil will be removed from the site. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace excavated soil and establish the designed grades at the site. Following removal of

soil, underlying bedrock may be used for backfill at the site if it is free of contamination and meets the requirements of DER-10 and Part 375-6.7(d).

3. Contingency Track 2 Remedy

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

If no EE or SMP is needed to achieve soil or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapters 57 and 95 of the City of Yonkers code, which prohibits potable use of groundwater without prior approval.

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

A. Institutional Control

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

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted-residential, commercial, or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

B. Site Management Plan

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

1. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
Institutional Controls: The Environmental Easement discussed in the contingent institutional control section above.

Engineering Controls: Any engineering controls required by the contingency remedy.

This plan includes, but may not be limited to:

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

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

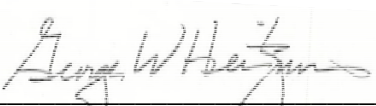
- monitoring of groundwater to assess the performance and effectiveness of the remedy
- monitoring for vapor intrusion for any future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above and
- a schedule of monitoring and frequency of submittals to the Department.

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.

July 19, 2018

Date



George Heitzman, Director

Remedial Bureau C

DECISION DOCUMENT

Kimball Residences
Yonkers, Westchester County
Site No. C360141
July 2018

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, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

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 from March 21, 2018 to May 7, 2018, 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:

Yonkers Public Library
Attn: Edward Falcone
16 Thompson Street
Yonkers, NY 10707
Phone: 914-779-3774

NYSDEC Region 3
21 South Putt Corners Rd
New Paltz, NY 12561
Phone: (845) 256-3000

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, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Site Location: The site is located on Yonkers Avenue and Bronx River Road in the City of Yonkers, Westchester County. It is bordered to the south by Yonkers Avenue and to the east by Bronx River Road. Further to the east is the Bronx River Parkway.

Site Features: The site is irregular-shaped consisting of 8 tax parcels totaling approximately 0.72 acres. There is approximately 200 feet of frontage on the northern side of Yonkers Avenue and approximately 125 feet of frontage of the western side of Bronx River Road. The site formerly contained six buildings, two of which had been damaged by fire. Site buildings were demolished in November and December 2016. The site surface currently consists of former building slab and bare soil. The site is currently fenced to prevent access and control erosion.

Current Zoning and Land Use: The site is in a BA zone (neighborhood commercial and apartment housing, high density) in a Residential R-2 occupation classification group.

Past Use of the Site: Various past uses of the site include multiple dry cleaners, a theater, and a gasoline service station. Soil vapor sampling conducted prior to the demolition of the former dry cleaner on Lot 17.18 indicated elevated levels of the VOCs in sub-slab vapor samples. All underground storage tanks (USTs) have been closed and removed and except for two suspected USTs along the southern boundary of Lot 15.16.

Site Geology and Hydrogeology: Soil generally consists of brown, fine to medium-grained sandy fill material with varying degrees of gravel from the surface to approximately 8 feet below surface grade (bsg) overlying dense, brown fine to medium-grained native sands and weathered rock from approximately 8 to 20 feet bsg.

The proposed site is in an area that slopes moderately downward to the southeast. In general, groundwater was not present throughout the overburden or shallow bedrock. Groundwater was encountered in only one overburden monitoring well (TW-05), and in this case groundwater was

present only prior to purging of the well. Groundwater flow direction likely follows topography, flowing to the southeast towards the Bronx River.

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 which allows for unrestricted use of the site was evaluated.

A comparison of the results of the Remedial Investigation (RI) against unrestricted use standards, criteria and guidance values (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 Volunteer does not have an obligation to address off-site contamination. The Department 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 Department will seek to identify any parties (other than the Volunteer(s)) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will 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, the Department 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: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will

also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

arsenic	trichloroethene (TCE)
barium	petroleum products
cadmium	chromium
lead	copper
tetrachloroethane	zinc

The contaminant(s) 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.

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.

Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs); and soil vapor samples were analyzed for VOCs. All samples collected as part of RI were collected on-site. Based on investigations conducted to date, the primary contaminants of concern include VOCs and metals in soil, VOCs and metals in groundwater and VOCs in soil vapor.

Soil – Near surface and subsurface soil samples were collected for laboratory analysis. The VOC tetrachloroethene (PCE) and the metals arsenic, barium, chromium, copper, lead, mercury, nickel, selenium and zinc were detected in site soils in exceedance of unrestricted SCOs. PCE was detected in only one soil sample at a concentration of 7.1 parts per million (ppm) compared to the unrestricted soil cleanup objective (USCO) of 1.3 ppm. Metals were detected above USCOS at varying depths in subsurface soil samples throughout the site. Lead was detected in eight samples over USCOS at concentrations ranging from 71 ppm to 530 ppm (USCO 63 ppm), mercury was detected in seven samples over USCOS at concentrations ranging from 0.19 ppm to 2 ppm (USCO 0.18 ppm), and arsenic was detected in two samples ranging from 15 to 27 ppm (USCO 13ppm). The concentrations of metals detected in soil samples are consistent with the historic use of the site for various commercial and industrial purposes. Based on the results of the on-site soil investigation, it is unlikely that soil contamination is migrating off-site.

Groundwater - The VOC tetrachloroethene (PCE) and the metals aluminum, and lead were detected in site groundwater in exceedance of groundwater standards. In general, groundwater was not present throughout the overburden or shallow bedrock. Only one turbid groundwater sample was collected from overburden monitoring well TW-05. A PCE concentration of 13 parts per billion (ppb) was observed compared to the groundwater standard (GWS) of 5 ppb. For inorganics, lead was noted in groundwater at a concentration of 160 ppb (GWS 25 ppb), and aluminum at a concentration of 4,800 ppb (GWS 2000 ppb). Based on the results of the on-site groundwater investigation, it is unlikely that groundwater contamination is migrating off-site.

Soil Vapor - Soil vapor sampling conducted prior to the demolition of the former dry cleaner on Lot 17.18 indicated elevated levels of the VOCs PCE and trichloroethene (TCE) in sub-slab soil vapor samples. There are currently no buildings remaining on the site therefore a full soil vapor

intrusion investigation was not conducted. Four soil vapor samples were collected from the site during the Remedial Investigation. Soil vapor samples were collected near the northern, southern, and eastern boundaries of the site. The VOC tetrachloroethene (PCE) was detected at elevated levels in all four soil vapor samples. PCE concentrations in soil vapor ranged from 39 micrograms per meter cubed (ug/m^3) to $327 \text{ ug}/\text{m}^3$). No other VOCs were detected in these four soil vapor samples. Based on the results of the on-site soil vapor investigation, contaminated soil vapor may be migrating off the site and therefore soil vapor intrusion investigations of off-site buildings are recommended.

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*.

People will not come into contact with site-related soil and groundwater contamination unless they dig below the ground surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by site-related 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. The site is vacant so inhalation of site contaminants in indoor air via soil vapor intrusion is not a current concern. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any buildings developed on the site in the future. Additional sampling is recommended to determine if soil vapor intrusion is 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.

Soil

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.

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 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 Restoration to Pre-Disposal or Unrestricted Conditions (Track 1) 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.

2. Excavation

Excavation and off-site disposal of all on-site soils above bedrock which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately 22,440 cubic yards of contaminated soil will be removed from the site. Excavation and removal of any underground storage tanks

(USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace excavated soil and establish the designed grades at the site. Following removal of soil, underlying bedrock may be used for backfill at the site if it is free of contamination and meets the requirements of DER-10 and Part 375-6.7(d).

3. Soil Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion, if identified.

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

If no EE or SMP is needed to achieve soil or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapters 57 and 95 of the City of Yonkers code, which prohibits potable use of groundwater without prior approval.

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

Contingent Remedial Elements:

A. Institutional Control

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

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted-residential, commercial, or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

B. Site Management Plan

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

1. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
Institutional Controls: The Environmental Easement discussed in the contingent institutional control section above.

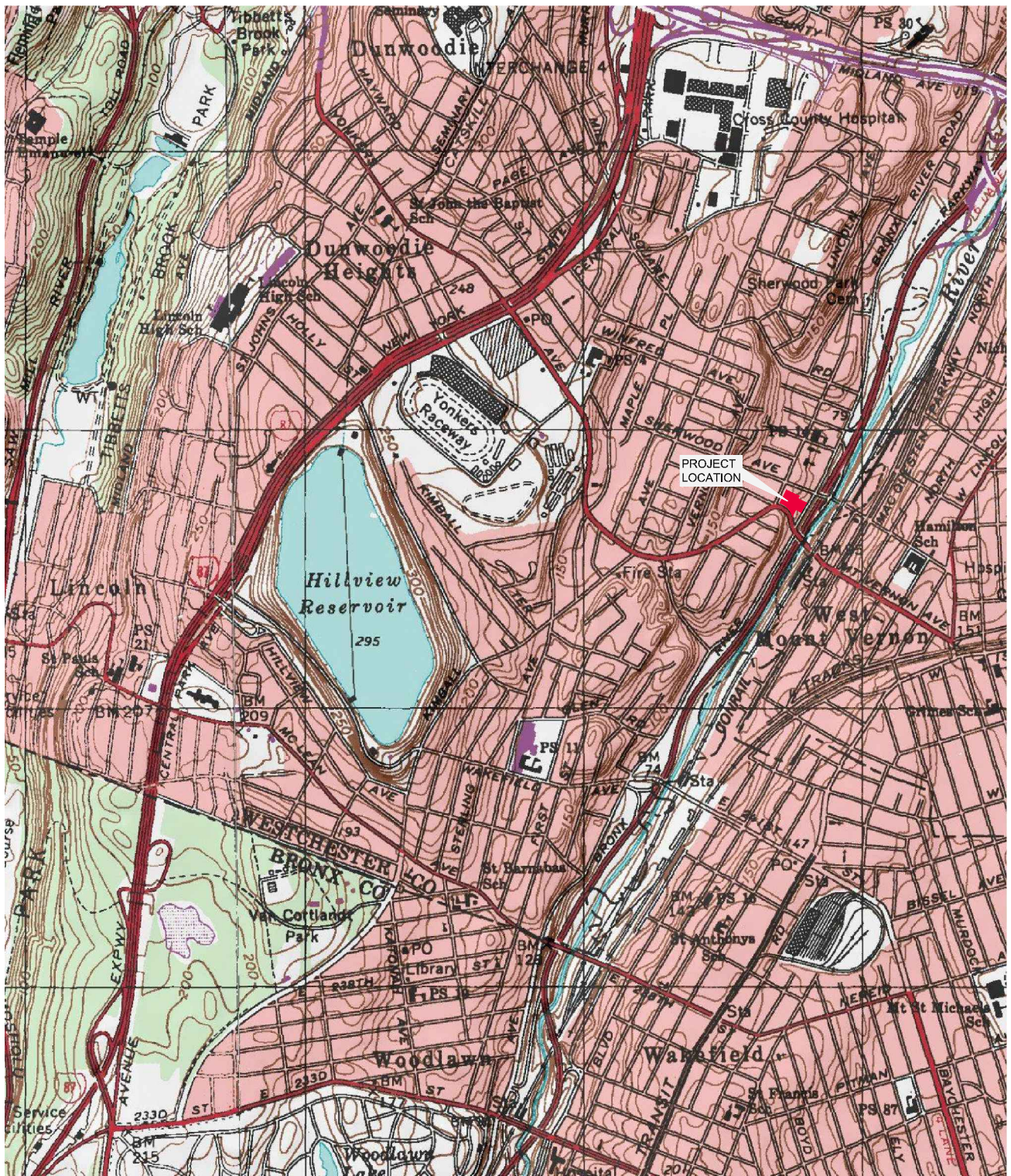
Engineering Controls: Any engineering controls required by the contingency remedy.

This plan includes, but may not be limited to:

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

2. 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 performance and effectiveness of the remedy
- monitoring for vapor intrusion for any future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above and
- a schedule of monitoring and frequency of submittals to the Department.



SOURCE: USGS TOPOGRAPHIC MAP OF THE MT.VERNON, NEW YORK QUADRANGLE, DATED 1995, DIGITAL IMAGE PROVIDED BY MYTOPO.COM



PAULUS, SOKOLOWSKI AND SARTOR ARCHITECTURE & ENGINEERING, PC.
 1 LARKIN PLAZA
 SECOND FLOOR
 YONKERS, NY 10701
 PHONE: (914) 509-8600

PROJECT TITLE **KIMBALL GARDENS, BCP SITE #C360141
 REMEDIAL INVESTIGATION AND REMEDIAL ACTION WORK**

SHEET TITLE **U.S.G.S. SITE LOCATION MAP**

PROJ. NO.: 05638-0001	DRN. BY: R.E.	SCALE: N.T.S
DATE: 02/22/2016	CK'D BY: J.B.	SHT. NO.: FIGURE 1

