DECISION DOCUMENT

Glenwood Container Site
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360154
September 2019

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

DECLARATION STATEMENT - DECISION DOCUMENT

Glenwood Container Site
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360154
September 2019

Statement of Purpose and Basis

This document presents the remedy for the Glenwood Container 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 Glenwood Container 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. 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 will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation and off-site disposal of soil containing elevated levels of semi-volatile organic compounds (SVOCs), lead and mercury at the east end of the site proximate to the concrete retaining wall. Approximately 180 cubic yards of contaminated soil will be removed from the site. If grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u) is visually observed during the excavation, then the excavation will extend horizontally and/or vertically to remove the grossly contaminated soil, to the extent feasible.

Additionally, the remedy will include the excavation and removal of underground piping including removal of the floor drain debris containing elevated levels of PCBs, SVOCs and lead located in the interior loading dock area of the on-site building. In addition to removal of the observed floor drain debris, the existing floor drain structures and on-site downgradient piping will also be removed and replaced.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for restricted residential use will be brought in to replace the excavated soil and establish the designed grades at the site.

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

4. Any on-site buildings will be required to have a sub-slab depressurization system (SSDS) or other acceptable measures, to mitigate potential migration of vapors into the building. In addition, soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

5. A perimeter evaluation of soil vapor will be conducted, due to the potential for exposures to site-related contamination off-site. These data will inform the design of the SSDS/SVE systems.

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

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use 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 Westchester County DOH; and
- require compliance with the Department approved Site Management Plan.

7. 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 Paragraph 6 above.
Engineering Controls: The soil cover and the SSDS/SVE system discussed in Paragraphs 3 and 4, respectively, above.
This plan includes, but may not be limited to:
o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
o a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
o provisions for the management and inspection of the identified engineering controls;
o maintaining site access controls and Department notification; and
o 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:
o monitoring of soil vapor to assess the performance and effectiveness of the remedy;
o a schedule of monitoring and frequency of submittals to the Department;
c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:
o procedures for operating and maintaining the system(s); and
o compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

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.

9/10/2019
Date

Janet Brown, Director
Remedial Bureau C

DECISION DOCUMENT

Glenwood Container Site
Yonkers, Westchester County
Site No. C360154
September 2019

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 significant 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, 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 M. Falcone
One Larkin Center
Yonkers, NY 10701
Phone: (914) 337-1500

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 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

Location: The site is located at 72 Alexander Street in Yonkers, approximately 300 south of the intersection of Alexander Street and Ashburton Avenue. The site is approximately 450 feet east of the Hudson River and immediately west of the Metro North Railroad.

Site Features: The 17,000 square-foot (about 0.4-acre) site, currently contains a one-story, 11,500 square foot abandoned industrial building. The entire site is covered with either a building or asphalt pavement. East of the building the pavement has deteriorated, allowing the growth of vegetation and the exposure of soil.

Current Zoning and Land Use: The site is currently zoned as “I”, Industrial District. The site is currently vacant. The PolyChrome Manufacturing Brownfield Cleanup Program site is adjacent to the site to the north. The former Patclin Chemical Company occupies adjacent property to the south. The surrounding area consists of mainly commercial, industrial, or vacant uses and a Metro North Hudson Line Railroad right-of-way. The nearest residential area is approximately 1,000 feet east of the site.

Past Use of the Site: The site was developed between 1917 and 1942 and was initially used as a warehouse. Speedway Garage and Universal Glenwood Packaging began operating on the property some time prior to 1971. Garage operations ceased prior to 1982, and the property was operated by Glenwood Container and Universal Glenwood Packaging until 2001. Past operation of the site included the potential use of the interior floor drain as a disposal site for petroleum, on-site underground storage tanks (USTs), and scrap truck storage.

Site Geology and Hydrogeology: Based on reports from sites in the vicinity, Glenwood Container is underlain by schist bedrock at approximately 85 feet below ground surface. Positioned above the bedrock is a glacial till layer which is overlain by Hudson River sediment deposits consisting mostly of sand with minor amounts of silt and clay. Three of the Glenwood Container RI borings penetrated a portion of the Hudson River sediments at an approximate depth of 17 feet below ground surface. Urban fill, consisting primarily of sand with some gravel and occasional brick and glass fragments, lies above the native Hudson River deposits. Groundwater flow is westward, toward the Hudson River. The depth to groundwater is approximately seven feet below ground surface.

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

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

SECTION 5: ENFORCEMENT STATUS

The Applicant 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.

The Department will seek to identify any potentially responsible parties (PRPs) (other than the Volunteer) known or suspected to be responsible for the contamination potentially emanating from the site. The Department will bring an enforcement action against the PRPs if the additional sampling to be conducted during the remedial phase of the project shows potential soil vapor contamination beyond the site boundary. If an enforcement action cannot be brought, or PRPs cannot be identified, 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:

- air
- groundwater
- soil
- soil vapor
- 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. 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:

polychlorinated biphenyls (PCB)
mercury
copper
ethylbenzene
xylene (mixed)
benzo(b)fluoranthene
lead
indeno(1,2,3-CD)pyrene
benzo(a)anthracene
benzo(a)pyrene
chrysene
1,1,1-Trichloroethane(TCA)
Tetrachloroethene (PCE)

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

- 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 were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Based upon investigations conducted to date, the primary contaminants of concern include benzo(a)anthracene, benzo(b)fluoranthene, indeno (1,2,3-cd) pyrene, mercury, lead and copper, ethylbenzene and xylenes, in soil; 1,1,1 trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE) in sub-slab soil vapor, and various SVOCs, metals and PCBs in the floor drain debris.

Soil - Subsurface (below top 2 inches)

Lead exceeded the unrestricted use soil cleanup objective (USCO) of 63 parts per million (ppm) in three out of seven soil samples, and the restricted residential use soil cleanup objective (RRSCO) of 400 ppm in three out of the seven soil samples, with the highest concentration of 3,000 ppm. Mercury exceeded the USCO of 0.18 ppm in five out of seven soil samples and the RRSCO of 0.81 ppm in five out of seven samples, with the highest concentration of 310 ppm. Copper exceeded the USCO of 50 ppm in five out of seven soil samples and the RRSCO of 270 ppm in three out of seven soil samples, with the highest detected concentration at 1,400 ppm. These impacts are typical of urban fill, which has been identified across the site at depths up to 17 feet, below ground surface (bgs).

Ethyl benzene exceeded the USCO of 1 ppm and the RRSCO of 41 ppm in one sample at a concentration of 200 ppm. Total xylenes were found in the same sample at a concentration of 290 ppm, exceeding the USCO of 0.26 ppm and the RRSCO of 100 ppm. No other VOCs or pesticides were detected in site soils. PCBs were not detected above the USCO of 0.1 ppm.

Soil - Surficial (top 0-2 inches)

Three surface soil samples were collected from top 0 to 2-inch interval below ground surface (bgs) in the eastern portion of the site where surface soils were observed to be covering the existing asphalt pavement. Benzo(b)fluoranthene exceeded the USCO/RRSCO of 1 ppm in all three surface soil samples, with the highest concentration at 2.5 ppm. Indeno(1,2,3-cd)pyrene exceeded the

USCO/RRSCO of 0.5 ppm in all three surface soil samples, with the highest concentration of 1.3 ppm.

Lead exceeded the USCO of 63 ppm and the RRSCO of 400 ppm in all three surface soil samples, with the highest concentration at 2,500 ppm. Copper exceeded the USCO of 50 ppm in all three surface soil samples, and one sample exceeded the RRSCO of 270 ppm, with the highest concentration at 630 ppm.

PCBs exceeded the USCO of 0.1 ppm in all three surface soil samples but did not exceed the RRSCO of 1 ppm.

VOCs and pesticides were not detected in surface soil.

Data do not indicate any off-site impacts in soil related to this site, as most of the area is paved except in a small area in the eastern portion where surface soil is observed over the pavement, and there was no visible evidence of soil eroding off-site from this small area. The site is comprised of urban fill to a depth up to 17 feet bgs.

Floor Drain

The floor drain located in the interior loading dock area were observed to contain a build-up of debris. Analysis of the debris showed the presence of various SVOCs, metals and PCBs. PCBs were found as high as 98 parts per million (ppm) in the floor drain debris but did not exceed the RRSCO in the site soil, suggesting a direct drain disposal with no significant release into site media.

Groundwater

Groundwater did not exceed standards and guidance values for any parameters, with the exception of chloroform in one groundwater sample at 33 parts per billion (ppb), compared to the ambient water quality standard of 7 ppb. Chloroform is a typical by-product of chlorination and is often found in the environment due to leaking water lines.

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

Soil Vapor and Sub-slab Vapor

Three co-located and concurrent soil vapor, sub-slab and indoor air quality samples were collected at the site. One ambient air sample was also collected for background analysis. The three soil vapor samples were collected at a depth of approximately four feet below ground surface, corresponding to approximately two feet above the groundwater table. The three sub-slab samples were collected from approximately one to two inches below the foundation slab. Indoor air samples were collected approximately five feet above the slab within the open space building. 1,1,1-TCA was detected in the sub-slab vapor samples at levels ranging from 20.6 micrograms per cubic meter (ug/m3) to 35,700 ug/m3. Results of the soil vapor samples revealed levels of 1,1,1-TCA comparable to co-located sub-slab vapor samples. 1,1,1-TCA was detected at less than 1 ug/m3 for all three indoor

air samples. Tetrachloroethene (PCE) was detected in one sub-slab sample at a concentration of 321 ug/m3 with a co-located soil vapor concentration of 348 ug/m3 and indoor air concentration of 0.38 ug/m3. Trichloroethene was not detected in the any of the soil vapor, sub-slab and indoor air samples. Based on the levels of 1,1,1-TCA in both sub-slab vapor and soil vapor, soil vapor intrusion is a potential concern for the on-site building and mitigation is recommended based on comparison to NYSDOH's soil vapor intrusion (SVI) matrices. Since the building is currently unoccupied, soil vapor intrusion does not represent a current concern. The elevated levels of 1,1,1-TCA detected in both the on-site sub-slab vapor and soil vapor samples suggest that soil vapor intrusion may be a potential concern for off-site buildings. Therefore, additional soil vapor sampling and analysis will be conducted at the site boundary during the remedial design phase of this project to determine the potential for off-site soil vapor migration, and to inform the need for off-site investigation.

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 not fenced and people who enter the site could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil. 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 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 the buildings is referred to as soil vapor intrusion. The inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern because the site is vacant. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future redevelopment. Additional sampling is needed 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.

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 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 4: restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Removal, Site Cover and Vapor Mitigation remedy.

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

1. 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 will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation and off-site disposal of soil containing elevated levels of semi-volatile organic compounds (SVOCs), lead and mercury at the east end of the site proximate to the concrete retaining wall. Approximately 180 cubic yards of contaminated soil will be removed from the site. If grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u) is visually observed during the excavation, then the excavation will extend horizontally and/or vertically to remove the grossly contaminated soil, to the extent feasible.

Additionally, the remedy will include the excavation and removal of underground piping including removal of the floor drain debris containing elevated levels of PCBs, SVOCs and lead located in the interior loading dock area of the on-site building. In addition to removal of the observed floor drain debris, the existing floor drain structures and on-site downgradient piping will also be removed and replaced.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for restricted residential use will be brought in to replace the excavated soil and establish the designed grades at the site.

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

4. Any on-site buildings will be required to have a sub-slab depressurization system (SSDS) or other acceptable measures, to mitigate potential migration of vapors into the building. In addition, soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

5. A perimeter evaluation of soil vapor will be conducted, due to the potential for exposures to site-related contamination off-site. These data will inform the design of the SSDS/SVE systems.

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

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

- allow the use and development of the controlled property for restricted residential use 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 Westchester County DOH; and
- require compliance with the Department approved Site Management Plan.

7. 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 Paragraph 6 above.

Engineering Controls: The soil cover and the SSDS/SVE system discussed in Paragraphs 3 and 4, respectively, above.

This plan includes, but may not be limited to:

o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

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

o a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);

o provisions for the management and inspection of the identified engineering controls;

o maintaining site access controls and Department notification; and

o 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:

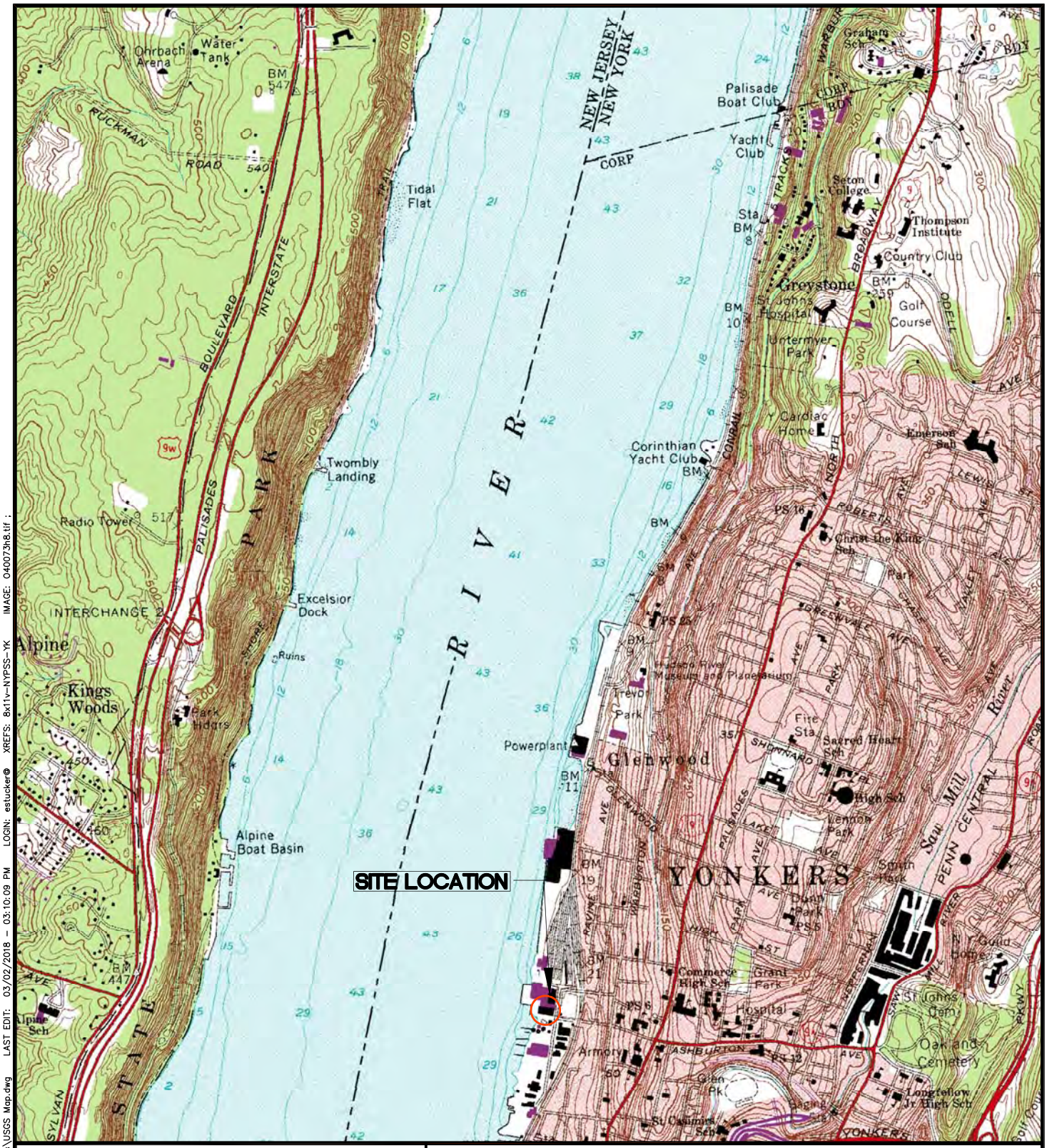
o monitoring of soil vapor to assess the performance and effectiveness of the remedy;

o a schedule of monitoring and frequency of submittals to the Department;

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:

o procedures for operating and maintaining the system(s); and

o compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.



PS&S
integrating design & engineering
PAULUS, SOKOLOWSKI AND SARTOR
55 MAIN STREET
3RD FLR
YONKERS, NEW YORK 10701
PHONE: (914) 509-8600
FAX: (914) 407-1679

PROJECT TITLE

FONDAK ENTERPRISES, LLC
72 ALEXANDER STREET
YONKERS, WESTCHESTER COUNTY, NEW YORK

SHEET TITLE

FIGURE 1
SITE LOCATION MAP
(USGS TOPOGRAPHIC MAP, 7.5 MINUTE SERIES)

DATE:	03/02/18	DRN. BY:	RP	PROJ. NO.:	05794.0001
SCALE:	NTS	CK'D BY:	CB	SHT. NO.:	1

FILE NAME: P:\05794\0001\DWGs\C-Civil\Figures\USGS Map.dwg LAST EDIT: 03/02/2018 - 03:10:09 PM LOGIN: estucker@ XREFS: 8x11v-NYPSS-YK IMAGE: 040073h8.tif ;

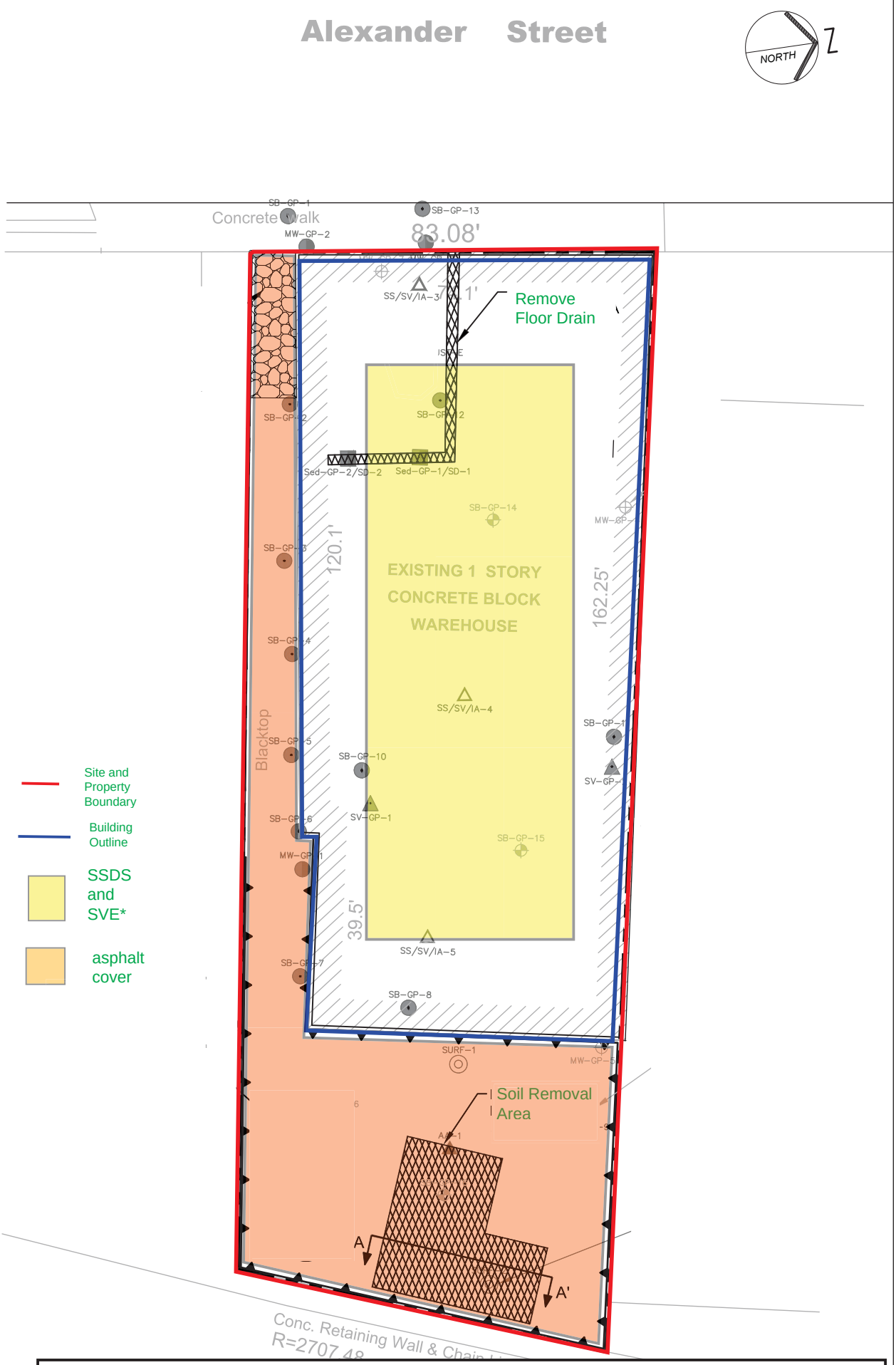


Figure 2
Remedial Components

refer to Decision Document for complete requirements

* details of the sub-slab depressurization system and soil vapor extraction system to be determined during design. The design will include perimeter soil vapor sampling