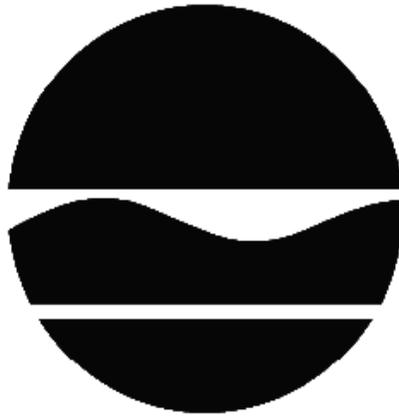


DECISION DOCUMENT

The Huguenot
Brownfield Cleanup Program
New Rochelle, Westchester County
Site No. C360157
December 2018



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

DECLARATION STATEMENT - DECISION DOCUMENT

The Huguenot
Brownfield Cleanup Program
New Rochelle, Westchester County
Site No. C360157
December 2018

Statement of Purpose and Basis

This document presents the remedy for The Huguenot 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 Huguenot 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. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable redevelopment.

2. Excavation

- A. All exposed soils in the upper two feet which exceed the soil cleanup objectives (SCOs) for restricted-residential use will be excavated and transported off-site for disposal; approximately 120 cubic yards.
- B. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.
- C. Approximately 260 cubic yards of contaminated soil will be removed from the areas of the former fuel oil and gasoline USTs, each extending to a depth of approximately 8 feet below grade.
- D. Post-excavation soil samples will be collected along the sidewalls and the bottom of the excavation(s) to document contamination remaining.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

4. Cover System

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

5. Institutional Control

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

- 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 County DOH; and
- require compliance with the Department-approved Site Management Plan.

6. Site Management Plan

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

- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Item 5 above.

Engineering Controls: The cover system discussed in Item 4 above.

This plan includes, but may not be limited to the following:

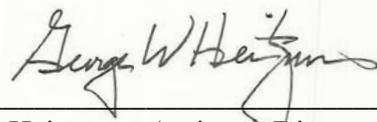
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
 - descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
 - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - a provision for evaluation of the potential for soil vapor intrusion for off-site buildings (including those that have previously declined testing) as sampling indicates a need, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - 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 engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to the following:
 - monitoring of groundwater to assess the performance and effectiveness of the remedy;
 - 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 discussed 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.

December 7, 2018

Date



George Heitzman, Assistant Director
Division of Environmental Remediation

DECISION DOCUMENT

The Huguenot
New Rochelle, Westchester County
Site No. C360157
December 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, 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 repository:

New Rochelle Public Library
Attn: Larry Sheldon
One Library Plaza
New Rochelle, NY 10801
Phone: 914-813-3749

Receive Site Citizen Participation Information by E-Mail

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 e-mail 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 0.39-acre site is located in an urban area at 381-393 Huguenot Street, in New Rochelle, Westchester County. The site is bound to the north by a vacant store (first floor) with a residential unit above; to the south by a three-story residential apartment building and a one-story residential building; to the east by Huguenot Street and beyond by a gasoline filling station; and to the west by an office building/warehouse.

Site Features: The site consists of four irregular-shaped parcels and currently maintains two structures. A 3,400-square foot one-story building with a partial basement sits on the south end of the site which, until August of 2018, was used for office and storage space associated with a U-Haul business, a real-estate firm, and a janitorial supply business. The second structure is a two-story building located on the north end of the site that until June of 2018 housed a church ministry on the first floor, two apartments on the second floor, and a hydraulic repair business in the basement. Both buildings are now vacant pending demolition.

Current Zoning and Land Use: The site is located within the City of New Rochelle's recently designated (2015) Downtown Overlay Zone in a mixed-use setting. The site and surrounding parcels are utilized for mixed commercial and residential uses. The nearest residential dwellings include two apartment buildings on the adjacent property south of the site, with mixed-use commercial/residential properties located immediately north of the site and to the east across Huguenot Street.

Past Use of the Site: The northern portion of the site has been utilized for dry cleaning services since 1931, and for manufacturing since the 1970s to 2010s. The potential source of contamination in this area includes the former dry-cleaning operations and former fuel oil underground storage tanks (USTs) located on-site. The central portion of the site has maintained a residential dwelling since 1931, and has been used for truck and trailer parking since the 1990s. The potential source of contamination in this area includes a former fuel oil UST, which was removed prior to 1997. The southern portion of the site has maintained a gasoline filling station and car wash from the 1930s to the 1950s, and then a warehouse from the 1970s to 2010s. The potential source of contamination in this area includes former gasoline USTs and a car wash operation. In addition, urban fill material was encountered throughout the site.

A spill was reported on June 6, 1996 at 381 Huguenot Street due to soil and groundwater contamination encountered during a previous site investigation (NYSDEC Spill #9604099). Phase I and II Environmental Site Assessments (ESAs) were performed in March 2016 at the site to evaluate potential environmental impacts. In February 2017 a Supplemental Subsurface Investigation (SSI) was conducted at the site to further define the environmental impacts present on-site.

Site Geology and Hydrogeology: The site is overlain by a layer of urban fill material consisting of a heterogeneous mixture of medium to fine sand and silt, coarse to fine gravel and occasional asphalt, concrete and brick fragments, which varies in thickness between 1 and 6 feet. Below the fill is a native soil layer made up of medium to fine sand with silt, coarse to fine gravel, and occasional cobbles. Weathered bedrock was encountered at depths between approximately 5 and 20 feet below grade, while more competent bedrock was found at depths between approximately 10 and 24 feet below grade. Groundwater was encountered at depths between approximately 6 and 9 feet below grade and flows in a west-northwest direction.

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 restricts the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

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

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Participant. The Applicant has an obligation to address on-site and 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 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
- 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 are:

benzo(a)anthracene
benzo(a)pyrene

benzo(b)fluoranthene
benzo[k]fluoranthene

chrysene	1,2,4-trimethylbenzene
dibenz[a,h]anthracene	1,3,5-trimethylbenzene
indeno(1,2,3-CD)pyrene	1,3-dichlorobenzene
cadmium	fluorene
lead	naphthalene
mercury	phenanthrene
polychlorinated biphenyls (PCB)	phenol
ethylbenzene	iron
isopropylbenzene	magnesium
butylbenzene	manganese
n-propylbenzene	selenium
sec-butylbenzene	sodium
trichloroethene (TCE)	

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminants of concern found in site soils include semi-volatile organic compounds (SVOCs) and metals. The primary contaminants of concern found in site groundwater include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals.

Soil - Numerous soil borings were completed between 2016 and 2018 to delineate the nature and extent of contamination on the site. Soil samples were analyzed for VOCs, SVOCs, metals, pesticides and PCBs. The investigations identified SVOCs and metals contamination in shallow soils at numerous locations across the site at concentrations exceeding restricted-residential use soil cleanup objectives (RRSCOs). SVOCs identified in the on-site soils exceeding applicable RRSCOs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)pyrene at

maximum concentrations of 5.8 parts per million (ppm), 5.8 ppm, 5.6 ppm, 5.4 ppm, 5.8 ppm, 0.72 ppm and 4.0 ppm, respectively. The RRSCOs for these compounds are 1.0 ppm, 1.0 ppm, 1.0 ppm, 3.9 ppm, 3.9 ppm, 0.33 ppm, and 0.5 ppm, respectively. Metals detected in the on-site soil exceeding applicable RRSCOs include cadmium, lead, and mercury at maximum concentrations of 4.79 ppm, 4,330 ppm, and 1.26 ppm, respectively. The RRSCOs for these metals are 4.3 ppm, 400 ppm, and 0.81 ppm, respectively. While no VOCs were detected above RRSCOs in any of the soil samples, VOCs were found in shallow soils at levels exceeding unrestricted use soil cleanup objectives (UUSCOs). VOCs identified in the shallow on-site soils exceeding applicable UUSCOs include trichloroethene (TCE) and xylenes at maximum concentrations of 3.1 ppm and 3.49 ppm, respectively. The UUSCOs for these compounds are 0.47 ppm and 0.26 ppm, respectively. No pesticides were detected above RRSCOs in any of the soil samples. PCBs were identified in deeper soils at one location at a concentration of 3.0 ppm, exceeding the RRSCO of 1.0 ppm.

Groundwater - On-site groundwater was investigated through the installation of monitoring wells located on and around the site. Groundwater investigations were conducted between 2016 and 2018 and included analyses for VOCs, SVOCs, metals, pesticides, PCBs, and per- and polyfluoroalkyl substances (PFAS). VOCs identified in site groundwater in excess of ambient water quality standards include ethylbenzene, isopropylbenzene, n-butylbenzene, n-propylbenzene, p-isopropyltoluene, sec-butylbenzene, trichloroethene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and 1,3-dichlorobenzene at maximum concentrations of 22 parts per billion (ppb), 190 ppb, 240 ppb, 400 ppb, 48 ppb, 220 ppb, 6.3 ppb, 20 ppb, 6 ppb, and 6.8 ppb, respectively. The ambient water quality standard for each of these compounds is 5 ppb, except for 3-dichlorobenzene at 3 ppb. SVOCs identified in on-site groundwater in excess of standards include benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, and phenol at maximum concentrations of 0.55 ppb, 0.35 ppb, 0.29 ppb, 0.57 ppb, 1,700 ppb, 0.05 ppb, 2,900 ppb, 2,900 ppb, and 1.4 ppb, respectively. The ambient water quality standards for these compounds are 0.002 ppb, 0.002 ppb, 0.002 ppb, 50 ppb, 0.002 ppb, 10 ppb, 50 ppb, and 1 ppb, respectively. Metals identified in site groundwater in excess of standards include aluminum, iron, magnesium, manganese, selenium, and sodium at maximum concentrations of 791 ppb, 52,500 ppb, 45,000 ppb, 16,000 ppb, 12 ppb, and 358,000 ppb, respectively. The ambient water quality standards for these metals are 100 ppb, 300 ppb, 35,000 ppb, 300 ppb, 10 ppb, and 20,000 ppb, respectively.

No pesticides were detected above standards in any of the groundwater samples collected in 2018. PCBs were detected in site groundwater at one upgradient well location at a concentration of 0.094 ppb, slightly exceeding the ambient water quality standard of 0.09 ppb.

Several PFAS compounds were detected in all the groundwater samples collected both on and off-site in 2018. Total PFOA+PFOS levels ranged from 25.8 to 184 parts per trillion (ppt) in the five on-site monitoring wells, and 16.7 to 32 ppt in the three off-site monitoring wells. Three of the five on-site monitoring wells were found with total PFOA+PFOS levels exceeding the Environmental Protection Agency's (EPA's) health advisory level of 70 ppt, with the highest levels found in the two monitoring wells located on the south side of the site adjacent to the former car wash and gas station. The third on-site monitoring well with total PFOA+PFOS

levels exceeding the EPA health advisory level of 70 ppt is located on the west side of the site downgradient of the former dry-cleaning operation.

Soil Vapor - Soil vapor samples were collected at two locations in the northern portion of the site (former dry cleaner location and beneath existing building) during the Phase II Environmental Site Assessment in 2016 and analyzed for VOCs. Primary contaminants identified in the on-site soil vapor included benzene, toluene, ethylbenzene, and xylene, collectively known as BTEX, and chlorinated VOCs (tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride) at maximum concentrations of 23.8 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), 35.7 $\mu\text{g}/\text{m}^3$, 133 $\mu\text{g}/\text{m}^3$, 397 $\mu\text{g}/\text{m}^3$, 4.37 $\mu\text{g}/\text{m}^3$, 14.3 $\mu\text{g}/\text{m}^3$, 18.4 $\mu\text{g}/\text{m}^3$, and 74.6 $\mu\text{g}/\text{m}^3$, respectively.

Indoor Air and Sub-Slab Vapor - Soil vapor intrusion sampling was offered to owners of six buildings surrounding the site and only one of the six owners agreed to the sampling. Soil vapor intrusion sampling was conducted during the Remedial Investigation in March 2018 at this adjacent building located north of the site that houses a church ministry on the first floor with apartments located above. Air samples collected were analyzed for VOCs. Carbon tetrachloride, methylene chloride and tetrachloroethene (PCE) were detected in the sub-slab soil vapor and indoor air (basement and 1st floor), with carbon tetrachloride and PCE also detected in the ambient (outdoor) air locations. Carbon tetrachloride levels ranged from 0.53 $\mu\text{g}/\text{m}^3$ (sub-slab) to 0.61 $\mu\text{g}/\text{m}^3$ (indoor air, maximum), to 0.54 $\mu\text{g}/\text{m}^3$ (ambient air, maximum). Methylene chloride levels ranged from 6.21 $\mu\text{g}/\text{m}^3$ (sub-slab) to 6.53 $\mu\text{g}/\text{m}^3$ (indoor air, maximum), to non-detect (ambient air). PCE levels ranged from 0.83 $\mu\text{g}/\text{m}^3$ (sub-slab) to 0.89 $\mu\text{g}/\text{m}^3$ (indoor air, maximum), to 0.57 $\mu\text{g}/\text{m}^3$ (ambient air, maximum). A comparison of the soil vapor intrusion sampling results with the NYSDOH Soil Vapor/Indoor Air Decision Matrices indicates no further actions are recommended to address human exposures. However, since only one of the six off-site buildings were allowed access and sampled, further evaluations are needed to determine if soil vapor intrusion is a potential concern for other off-site buildings.

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 contaminated soil or groundwater unless they dig below ground surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into the 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. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. However, an evaluation of the potential for soil vapor intrusion to occur is recommended for any site redevelopment. Soil vapor intrusion sampling was conducted at one off-site building and no soil vapor intrusion concerns were identified. Further evaluations are needed to determine if soil vapor intrusion is a potential concern for other 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.
- 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 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Removal and Cover System remedy.

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

1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable redevelopment.

2. Excavation

- A. All exposed soils in the upper two feet which exceed the soil cleanup objectives (SCOs) for restricted-residential use will be excavated and transported off-site for disposal; approximately 120 cubic yards.
- B. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.
- C. Approximately 260 cubic yards of contaminated soil will be removed from the areas of the former fuel oil and gasoline USTs, each extending to a depth of approximately 8 feet below grade.
- D. Post-excavation soil samples will be collected along the sidewalls and the bottom of the excavation(s) to document contamination remaining.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

4. Cover System

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

5. Institutional Control

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

- 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 County DOH; and
- require compliance with the Department-approved Site Management Plan.

6. Site Management Plan

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

- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Item 5 above.

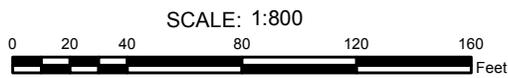
Engineering Controls: The cover system discussed in Item 4 above.

This plan includes, but may not be limited to the following:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
 - descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
 - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - a provision for evaluation of the potential for soil vapor intrusion for off-site buildings (including those that have previously declined testing) as sampling indicates a need, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - 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 engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to the following:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
 - 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 discussed above.

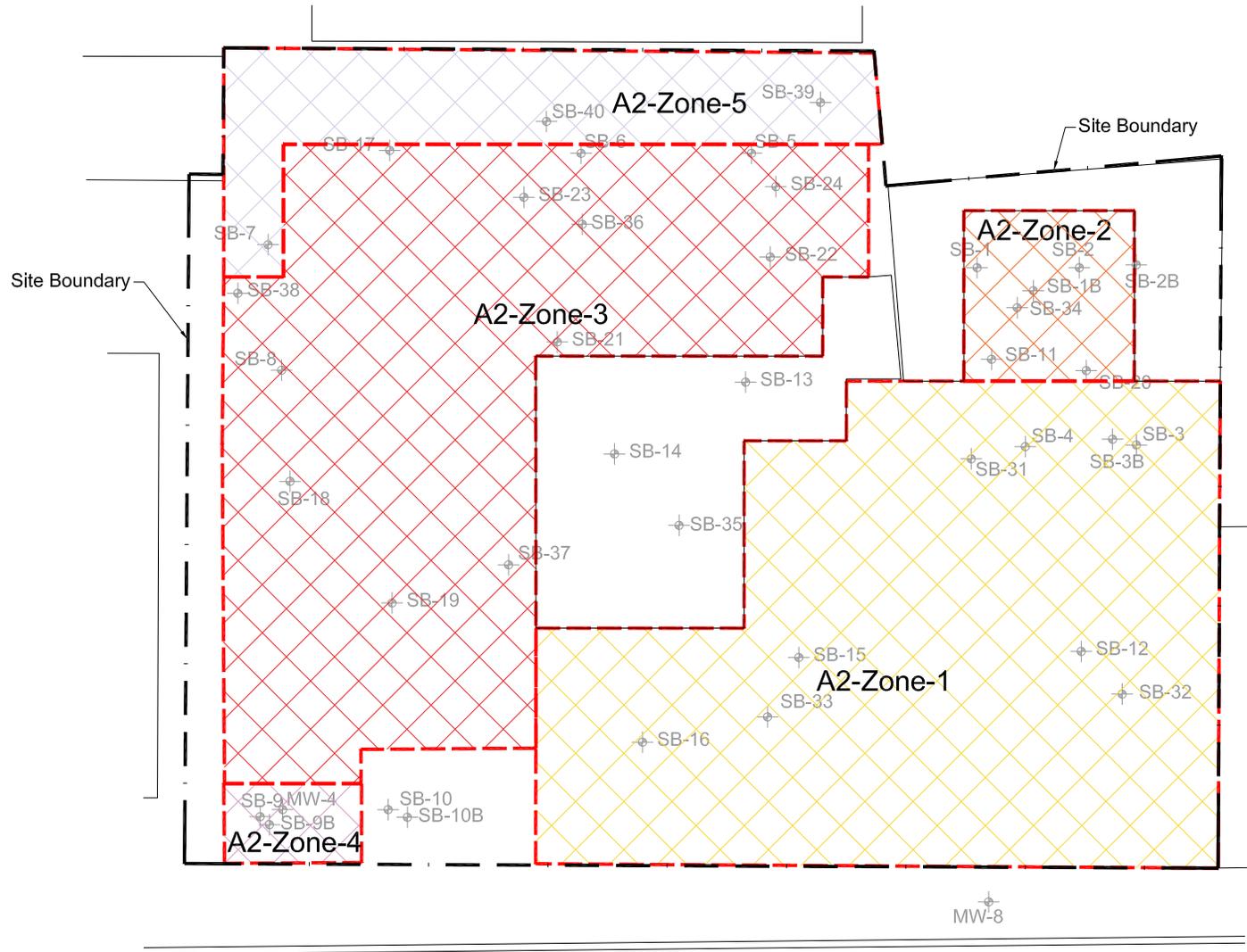


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Site Boundary

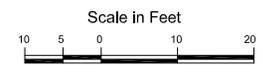
TITLE	SITE BASE MAP		Figure No.
			01
PROJECT	381-393 Huguenot Street New Rochelle, New York		Project No.
			2015-188
	DESIGN	WF	11-12-2018
	CHECK		
	REVIEW		



Legend

-  Site Boundary
-  A2-ZONE-1
-  A2-ZONE-2
-  A2-ZONE-3
-  A2-ZONE-4
-  A2-ZONE-5

Zone ID	Description	Area	Existing Grade EL	Excavation Bottom EL	Excavation Depth	Area of Existing Basement	Depth of Existing Basement	Volume of Existing Basement	Excavation Volume	Excavation Tonnage
	Unit	sq ft	ft. EL	ft. EL	ft	sq ft	ft	cubic yard	cubic yard	ton
Zone-1	Cellar	5917.0	87.0	76.0	11.0	2117.0	10.0	784.1	1,630.0	2,210.0
Zone-2	Former FO USTs	625.0	85.0	77.0	8.0	N/A	N/A	0.0	190.0	260.0
Zone-3	Garage/ drains	5434.0	85.0	80.0	5.0	1745.0	7.0	452.4	560.0	760.0
Zone-4	Former Gas USTs	234.0	87.0	79.0	8.0	N/A	N/A	0.0	70.0	100.0
Zone-5	Uncovered Area	1491.0	83.0	81.0	2.0	N/A	N/A	0.0	120.0	170.0
Total									2,570.0	3,500.0



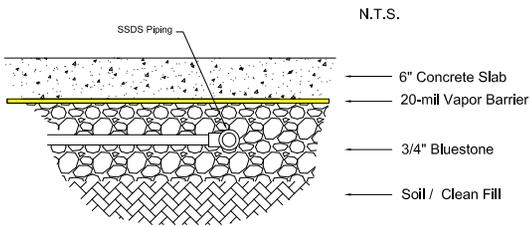
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TITLE: Proposed Remedial Excavation Plan			
381-393 Huguenot Street, New Rochelle, New York			
DRAWN BY: WF	REVISED BY:	BCP Site No. C360157	
CHECKED BY: SZ	REVISED DATE:	FIGURE No. 02	
DATE: 6-8-2018	APPROVED BY:		
SCALE: 1" = 25'	FILE NAME:		

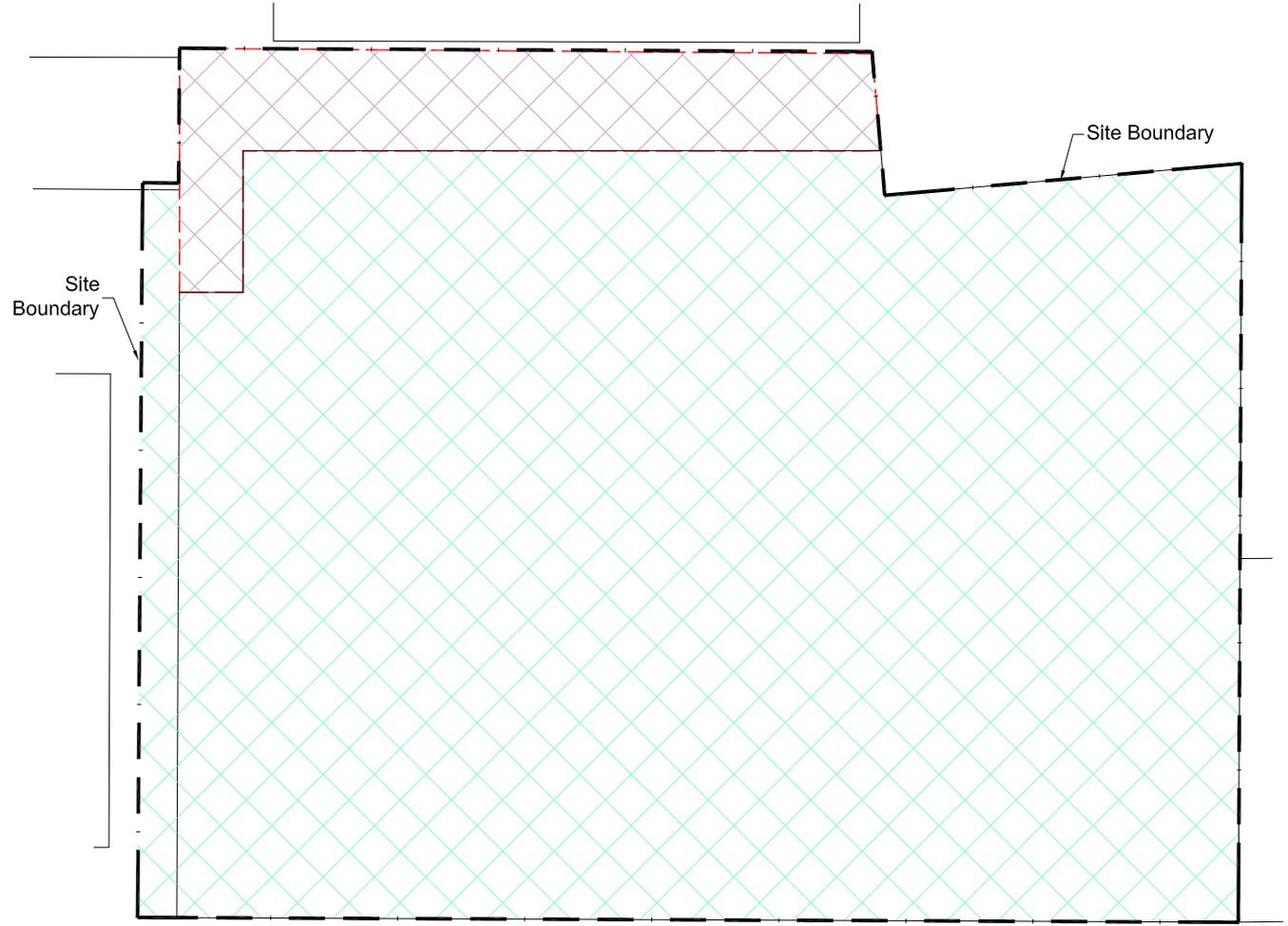
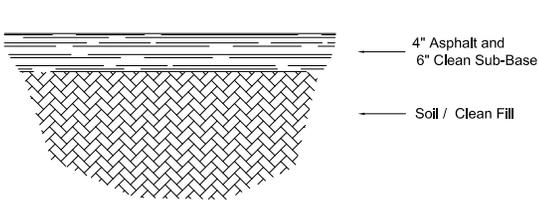




Typical Cover System Layout
Below Building/Basement Slab



Typical Cover System Layout
Below Exterior Parking Lot



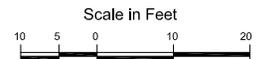
Note:
Upon completion of the site redevelopment, most of the Site will be covered by concrete/asphalt. For the areas that are not covered by concrete/asphalt, a two (2) feet layer of clean fill will be installed. The clean fill will meet the RRSCO requirements.

Note that part of the site will need to be leveled to grade. Any imported fill for site leveling purpose will need to meet the RRSCO requirements.

Legend

- Site Boundary
- Concrete/Asphalt
- 2-foot Clean Fill Material

Huguenot Street



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TITLE:		Site Covering System	
<i>381-393 Huguenot Street, New Rochelle, New York</i>			
DRAWN BY:	WF	REVISED BY:	
CHECKED BY:	SZ	REVISED DATE:	
DATE:	6-8-2018	APPROVED BY:	
SCALE:	1" = 25'	FILE NAME:	
		BCP Site No.	C360157
		FIGURE No.	03

