

DECISION DOCUMENT

WP Mall Cleaners & Gas Station Site
Brownfield Cleanup Program
White Plains, Westchester County
Site No. C360221
December 2023



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

WP Mall Cleaners & Gas Station Site
Brownfield Cleanup Program
White Plains, Westchester County
Site No. C360221
December 2023

Statement of Purpose and Basis

This document presents the remedy for the WP Mall Cleaners & Gas Station 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 WP Mall Cleaners & Gas Station Site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy, as shown in Figure 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and

- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all soil exceeding unrestricted use soil cleanup objectives (USCOs), as defined by 6 NYCRR Part 375-6.8. Approximately 5,500 tons of contaminated soil will be removed from the site. Dewatering, including treatment, handling, transport, and off-site disposal (if required), will be conducted in accordance with applicable local, state and federal regulations, as necessary, to enable the excavation activities. Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that USCOs for the site have been achieved.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought on-site to complete the backfilling of the excavation and establish design grades, as necessary.

4. In-situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat volatile organic compounds (VOCs) in groundwater. A chemical oxidant will be applied to the open excavation to destroy the contaminants in an approximately 32,000 square foot area located in the southern portion of the site.

5. Groundwater Monitoring

Monitoring will be required from up-gradient and down-gradient wells, as well as from within the treatment zone. Monitoring will be conducted for contaminants of concern. Additionally, the treatment zone will be monitored for dissolved oxygen and oxidation/reduction potential.

6. Vapor Intrusion Evaluation

As part of the Conditional 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.

7. Conditional Remedial Elements:

In the event that Track 1 unrestricted use is not achieved, conditional remedial elements will be required, and the remedy will achieve a Track 2 residential cleanup. Conditional remedial elements would include a Site Management Plan (SMP) and Environmental Easement.

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 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 New York State Department of Health (NYSDOH) or Westchester County Department of Health; 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 Control Plan that identifies all use restrictions for the site and details the steps and media-specific requirements necessary to ensure the following institutional controls remain in place and effective:

Institutional Controls: The environmental easement noted in item 7 above.

This plan includes, but may not be limited to:

- 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;
- Maintaining site access controls and Department notification; and
- The steps necessary for the periodic reviews and certification of the institutional controls.

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

- Monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional Control Plan discussed above;
- Monitoring of groundwater to assess the performance and effectiveness of the remedy; 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.

December 22, 2023

Date



Scott Deyette, Director
Remedial Bureau C

DECISION DOCUMENT

WP Mall Cleaners & Gas Station Site
White Plains, Westchester County
Site No. C360221
December 2023

SECTION 1: SUMMARY AND PURPOSE

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

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

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

SECTION 2: CITIZEN PARTICIPATION

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

DECInfo Locator - Web Application
<https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C360221>

White Plains Public Library
Attn: Brian Kenney
100 Martine Avenue
White Plains, NY 10601
Phone: 914-422-1400

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

Site Location:

The 1.808-acre site is located at 250 Hamilton Avenue, White Plains, Westchester County. The site is located on tax lot 125.67-5-1.1. The site was most recently a portion of the White Plains Mall and associated parking lot. The site is located in a mixed-use commercial and residential neighborhood. Barker Avenue, a restaurant, and a hotel are located north of the site. Cottage Place, a parking lot, a condominium building, and Berkeley College student dormitories are located east of the site. Hamilton Avenue and a New York Power Authority Building are located south of the site. A Brownfield Cleanup Program site (site no. C360177) abuts the west boundary of the site. The site is located approximately 0.35 miles from the Bronx River. It is not located in a flood zone.

Site Features:

Currently, a multi-story mixed use building is under construction on the site.

Current Zoning and Land Use:

The site is located in a Transit Development District (TD-1) and is currently being redeveloped as noted above. The surrounding properties include residential and commercial use.

Past Use and Investigation of the Site:

The site was developed with dwellings and garages prior to 1911. By 1930, multiple businesses operated on-site, including a gypsum partitions business, an electric motors building, a paint store, a plumbing shop, and a candy manufacturer. The candy manufacturer, along with a gasoline station located in the south-eastern portion of the site, are estimated to have been on-site from the 1930s through the 1970s. By 1987, all on-site buildings were demolished and replaced by a parking lot and eventually a portion of the White Plains Mall. A dry-cleaning facility is listed as a White Plains Mall occupant in 2010 and 2011. Use of the site as a candy manufacturer, gasoline station and dry-cleaning operations may have contributed to site contamination. Spill Number 17-06297 was reported September 28, 2017, based on evidence of petroleum contamination in soil and groundwater.

Site Geology and Hydrogeology:

Based on the United States Geological Survey and Westchester County Geographic Information System, the site lies at elevations ranging from 185 to 200 feet above the National Geodetic

Vertical Datum of 1983. Regional topography slopes downward to the west. Groundwater flows in the southwesterly direction. Groundwater depths range from approximately 9 to 24 feet below grade (ft bg). Deeper groundwater depths were found in the eastern portion of the site.

The soil at the site is characterized as Uf (Urban Land) which is covered by pavement, concrete, buildings, and other structures. A fill stratum is encountered from grade to depths of 12 ft bg. The fill layer consists of sand, silt, gravel, organics (wood/grass), brick, asphalt, and rubber. A layer of clay and silt were encountered beneath the fill between 7 and 13 ft bg. Sand is present in the layer of clay and silt, but content varied across the site. Between approximately 13 and 25.5 ft bg, a sand layer was encountered. The sand stratum consisted of brown, medium to coarse sand, little to some silt, and trace amounts of gravel. During geophysical investigations of the site, bedrock was encountered from approximately 13 to 40 ft bg. The depth of bedrock corresponded to the approximate elevations of the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative that restricts the use of the site to residential use (which allows for restricted-residential use, commercial use and industrial use) as described in Part 375-1.8(g) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

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

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A 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:

| | |
|------------------------|------------------------|
| ethylbenzene | benzo(k)fluoranthene |
| isopropylbenzene | chrysene |
| n-propylbenzene | dibenz[a,h]anthracene |
| 1,2,4-trimethylbenzene | indeno(1,2,3-cd)pyrene |
| 1,3,5-trimethylbenzene | dieldrin |
| xylene (mixed) | DDD |
| benzo(a)anthracene | DDE |
| benzo(a)pyrene | DDT |
| benzo(b)fluoranthene | arsenic |

| | |
|------------------|--------------------------------------|
| barium | Aideno(1,2,3-cd)pyrene |
| beryllium | isopropylbenzene |
| cadmium | perfluorooctanoic acid (PFOA) |
| chromium | benzene |
| copper | methyl tert butyl ether |
| lead | toluene |
| manganese | pentachlorophenol |
| mercury | naphthalene |
| n-propyl benzene | antimony |
| nickel | cadmium |
| selenium | alpha-BHC |
| silver | perfluorooctane sulfonic acid (PFOS) |
| thallium | |
| zinc | |

The contaminant(s) 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.

The following IRM has been completed at this site:

Upon acceptance into the BCP, and prior to the IRM, the primary contaminants of concern in soil were volatile organic compounds (VOCs), semi-VOCs (SVOCs), metals, and pesticides. Compounds that exceeded their unrestricted use soil cleanup objectives (USCOs) during the RI included (maximum concentrations given): ethylbenzene (37.3 parts per million [ppm] compared to the USCO of 1 ppm), xylenes (110 ppm compared to the USCO of 0.26 ppm), benzo(a)anthracene (1.5 ppm compared to the USCO of 1 ppm), benzo(a)pyrene (1.63 ppm compared to the USCO of 1 ppm), benzo(b)fluoranthene (2.67 ppm compared to the USCO of 1 ppm), benzo(k)fluoranthene (0.972 ppm compared to the USCO of 0.8 ppm), chrysene (1.68 ppm compared to the USCO of 1 ppm), dibenzo(a,h)anthracene (0.399 ppm compared to the USCO of 0.33 ppm), indeno(1,2,3-c,d)pyrene (1.57 ppm compared to the USCO of 0.5 ppm), arsenic (26.4 ppm compared to the USCO of 13 ppm), barium (1,100 ppm compared to the USCO of 350 ppm), chromium (120 ppm compared to the USCO of 30 ppm), copper (83.9 ppm compared to the USCO of 50 ppm), lead (3,120 ppm compared to the USCO of 63 ppm), manganese (3,320 ppm compared to the USCO of 1,600 ppm), mercury (0.97 ppm compared to the USCO of 0.18 ppm), nickel (75.5 ppm compared to the USCO of 30 ppm), selenium (6.5 ppm compared to the USCO of 3.9 ppm), silver (4.3 ppm compared to the USCO of 2 ppm), zinc (693 ppm compared to the USCO of 109 ppm), dieldrin (0.007 ppm compared to the USCO of 0.005 ppm), 4,4-DDD (0.103 ppm compared to the USCO of 0.0033 ppm), 4,4-DDE (0.0512 ppm compared to 0.0033 ppm), and 4,4-DDT (0.06 ppm compared to the USCO of 0.0033 ppm).

Remedial investigation groundwater sampling indicated impacts of VOCs, SVOCs, metals (filtered), and per- and polyfluoroalkyl substances (PFAS) in exceedance of New York Codes, Rules and Regulations Title 6 (6 NYCRR) and guidance documents found in the Division of Water Technical and Operational Guidance Series (TOGs) Standards, Criteria and Guidance Values (SCGs), including, but not limited to: benzene (3.2 parts per billion [ppb] compared to the SCG of 1 ppb), toluene (18.1 ppb compared to the SCG of 5 ppb), ethylbenzene (632 ppb compared to the SCG of 5 ppb), isopropylbenzene (80.3 ppb compared to the SCG of 5 ppb), xylenes (1,670 ppb compared to the SCG of 5 ppb), benzo(a)anthracene (4.1 ppb compared to the SCG of 0.002 ppb), benzo(a)pyrene (4.4 ppb compared to the SCG of non-detect), benzo(b)fluoranthene (5.8 ppb compared to the SCG of 0.002 ppb), benzo(k)fluoranthene (2.3 ppb compared to the SCG of 0.002 ppb), chrysene (3.8 ppb compared to the SCG of 0.002 ppb), ideno(1,2,3-cd)pyrene (0.18 ppb compared to the SCG of 0.002 ppb), indeno(1,2,3-c,d)pyrene (6.2 ppb compared to the SCG of 0.002 ppb), 2,4-dimethylphenol (11.5 ppb compared to the SCG of 1 ppb), pentachlorophenol (5.3 ppb compared to the SCG of 1 ppb), naphthalene (25.1 ppb compared to the SCG of 10 ppb), antimony (41.3 ppb compared to the SCG of 3 ppb), arsenic (44.5 ppb compared to the SCG of 25 ppb), cadmium (45.4 ppb compared to the SCG of 5 ppb), chromium (483 ppb compared to the SCG of 50 ppb), iron (50,700 ppb compared to the SCG of 300 ppb), lead (307 ppb compared to the SCG of 50 ppb), manganese (20,400 ppb compared to the SCG of 300 ppb), selenium (45.3 ppb compared to the SCG of 10 ppb), sodium (1,670,000 ppb compared to the SCG of 20,000 ppb), perfluorooctanesulfonic acid (152 parts per trillion [ppt] compared to the SCG of 2.7 ppt) and perfluorooctanoic acid (71.2 ppt compared to the SCG of 6.7 ppt).

Additionally, prior to the IRM, soil vapor samples were collected. No indoor air samples were collected since the on-site building was being demolished. During the Phase II site investigation, trichloroethylene (TCE) was detected in soil vapor at a maximum concentration of 13 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). During the remedial investigation, TCE was detected at a maximum concentration of 0.97 $\mu\text{g}/\text{m}^3$. This compound was not detected in soil or groundwater above its USCO or SCG.

Excavation and Off-site Disposal of Soil Exceeding Unrestricted Use Soil Cleanup Objectives, Underground Storage Tank and Drum Removal and Off-site Disposal, and Groundwater Extraction and Treatment

The IRM included removal of on-site soil exceeding USCOs to depths up to 40 ft bg. The IRM did not remove all soil exceeding USCOs. The excavated material was properly disposed off-site. A total of 140,874 tons of contaminated soil was removed from the site. Approximately 5,500 tons of impacted soil remains on-site. Post-excavation confirmatory soil samples were collected from the limits of the excavation to demonstrate that the IRM achieved USCOs, as documented in the July 2023 Construction Completion Report (CCR). In addition, seven (7) underground storage tanks (USTs) and one (1) drum were identified and removed from the site as part of the IRM. A figure indicating the site-wide IRM excavation is attached as Figure 2.

During IRM excavation, groundwater was removed from the excavation and treated prior to permitted off-site discharge. A series of pumps dewatered the excavation, flowing to a

settling/holding tank before processing through two in-line bag filters and two reactivated carbon vessels. Treated water was discharged to a Westchester County sanitary sewer under permit 487-22. Confirmation samples of treated water were collected as prescribed, the limits of which were set forth by the Westchester Department of Public Works, the Westchester County Department of Health, and the NYSDEC. Approximately 748,000 gallons of contaminated groundwater was treated and discharged.

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: Prior to the IRM, the primary contaminants of concern included VOCs, metals, and pesticides in soil, VOCs, SVOCs, metals and PFAS in groundwater, and VOCs in soil vapor. Impacts were identified in soil across the site to depths up to 40 ft bg.

Soil: Following completion of the on-site IRM, all soil above USCOs, with the exception of five (5) cells in the southern portion of the site, have been removed and disposed of off-site. The removal of approximately 5,500 tons of contaminated soil in the southern portion of the site along Hamilton Avenue cannot be conducted until the decommissioning and removal of electric utility vaults in the area. This material is impacted with VOCs, SVOCs, metals, and pesticides, as detailed in Section 6.2, above.

Groundwater: The most recent complete (site-wide) round of groundwater sampling (November 2022) indicated exceedances of New York State Ambient Water Quality Standards (AQWS) for VOCs, SVOCs, metals, and PFAS, as detailed in Section 6.2, above. Groundwater samples were collected from three (3) monitoring wells in the southern portion of the site for VOC analysis in April 2023. Those results indicated methyl-tert-butyl-ether (MTBE) concentrations above its AWQS (10 ppb), at a maximum concentration of 220 ppb. No other VOCs were detected above AWQSs during that sampling event.

Soil Vapor: Based on the soil vapor results presented in Section 6.2, above, the extent of soil removal at the site and the intended use, a post remediation soil vapor intrusion evaluation is required.

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 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

subsurface may move into the soil vapor, which may move into overlying buildings and affect the indoor air. This process is referred to as soil vapor intrusion. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a current concern. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Sampling does not indicate 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.
- Remove the source of ground or surface water contamination.

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 Remedial Action Work Plan. The remedy is selected pursuant to the remedy selection criteria

set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Conditional Track 1 remedy.

The selected remedy is referred to as the Excavation and Groundwater Treatment remedy.

The elements of the selected remedy, as shown in Figure 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all soil exceeding unrestricted use soil cleanup objectives (USCOs), as defined by 6 NYCRR Part 375-6.8. Approximately 5,500 tons of contaminated soil will be removed from the site. Dewatering, including treatment, handling, transport, and off-site disposal (if required), will be conducted in accordance with applicable local, state and federal regulations, as necessary, to enable the excavation activities. Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that USCOs for the site have been achieved.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought on-site to complete the backfilling of the excavation and establish design grades, as necessary.

4. In-situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat volatile organic compounds (VOCs) in groundwater. A chemical oxidant will be applied to the open excavation to destroy the contaminants in an approximately 32,000 square foot area located in the southern portion of the site.

5. Groundwater Monitoring

Monitoring will be required from up-gradient and down-gradient wells, as well as from within the treatment zone. Monitoring will be conducted for contaminants of concern. Additionally, the treatment zone will be monitored for dissolved oxygen and oxidation/reduction potential.

6. Vapor Intrusion Evaluation

As part of the Conditional 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.

7. Conditional Remedial Elements:

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

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve Track 2 residential use.

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 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 New York State Department of Health (NYSDOH) or Westchester County Department of Health; 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 Control Plan that identifies all use restrictions for the site and details the steps and media-specific requirements necessary to ensure the following institutional controls remain in place and effective:

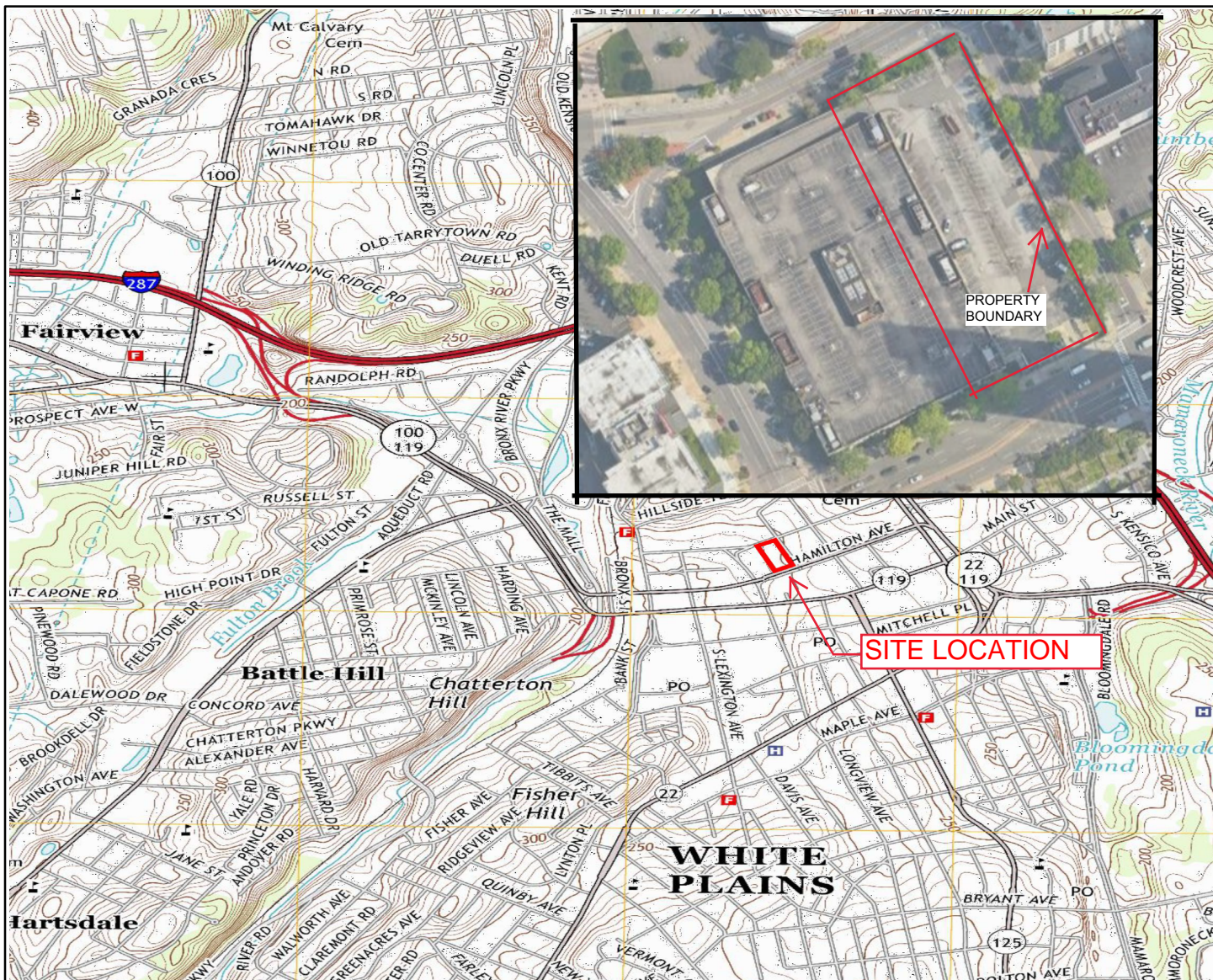
Institutional Controls: The environmental easement noted in item 7 above.

This plan includes, but may not be limited to:

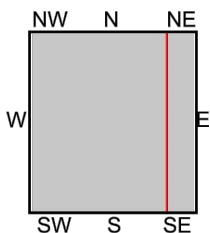
- Descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Maintaining site access controls and Department notification; and
- The steps necessary for the periodic reviews and certification of the institutional controls.

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

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



This report includes information from the following map sheet(s).



TP, White Plains, 2013, 7.5-minute
NE, Glenville, 2012, 7.5-minute



QUADRANGLE LOCATION



Department of
Environmental
Conservation

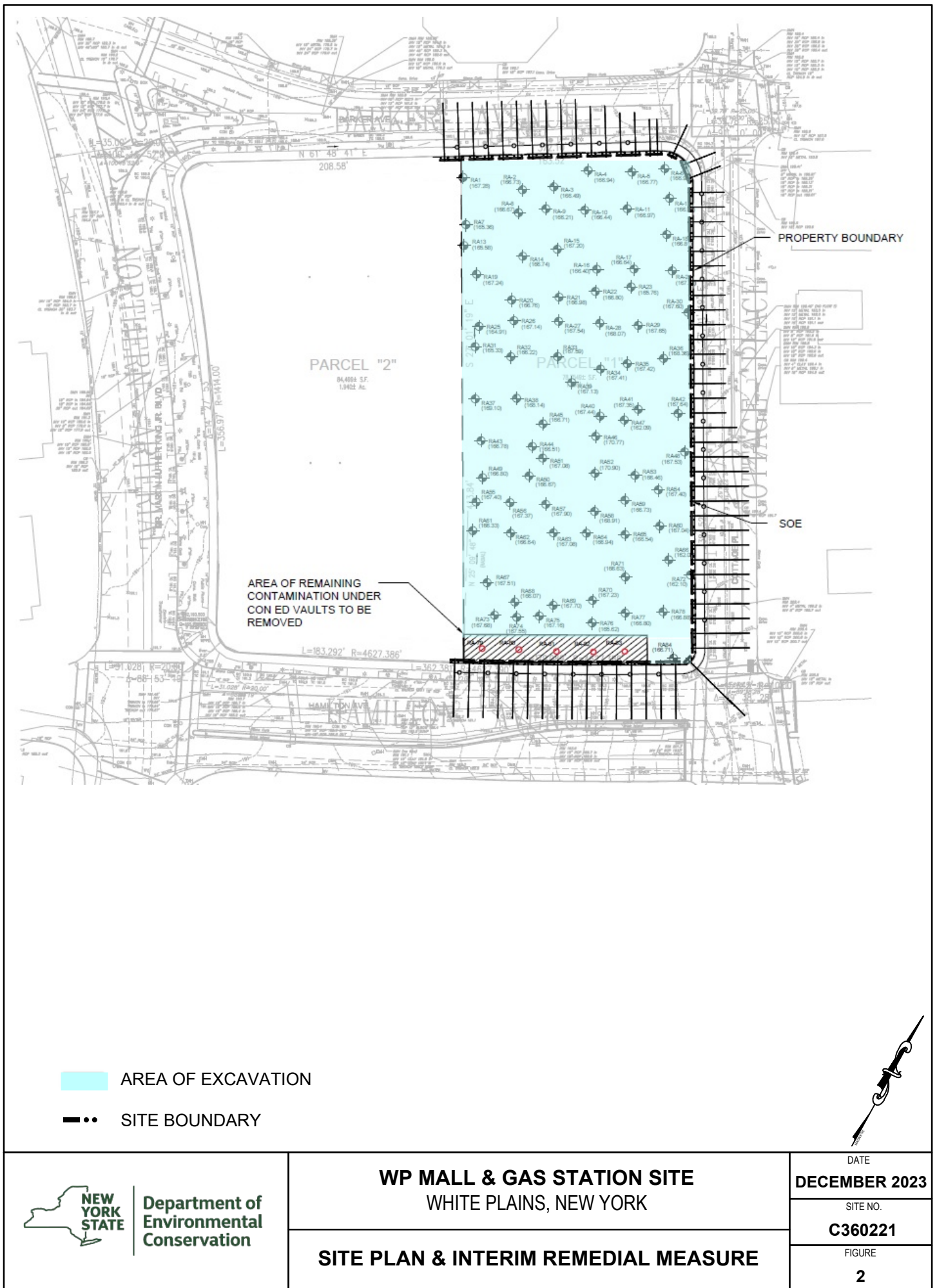
WP MALL & GAS STATION SITE
WHITE PLAINS, NEW YORK

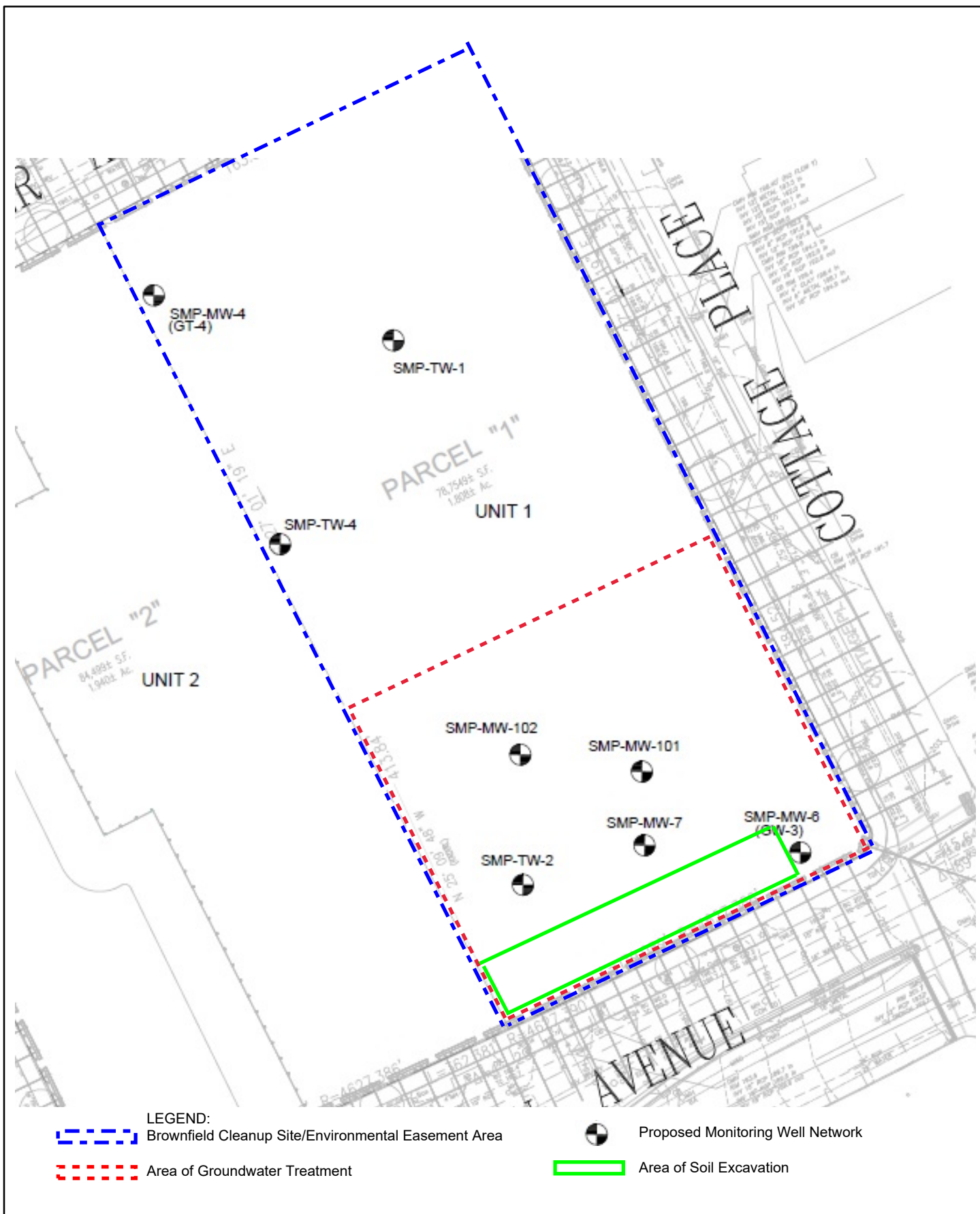
SITE LOCATION & PLAN (INSET)

DATE
DECEMBER 2023

SITE NO.
C360221

FIGURE
1





Department of
Environmental
Conservation

WP MALL & GAS STATION SITE
WHITE PLAINS, NEW YORK

CONDITIONAL TRACK 1/EASEMENT AREA

| |
|------------------------------|
| DATE DECEMBER 2023 |
| SITE NO. C360221 |
| FIGURE 3 |