DECISION DOCUMENT

Pfizer Sites B and D
Operable Unit Number 01: Site D - 191 Harrison Ave, 60-66 Gerry St
Operable Unit Number 03: Eastern portion of Site B - 73-87 Gerry Street
Voluntary Cleanup Program
Brooklyn, Kings County
Site No. V00350
February 2015

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

DECLARATION STATEMENT - DECISION DOCUMENT

Pfizer Sites B and D
Operable Unit Numbers: 01 and 03
Voluntary Cleanup Program
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Statement of Purpose and Basis

This document presents the remedy for Operable Unit Numbers: 01: Site D - 191 Harrison Ave, 60-66 Gerry St and 03: Eastern portion of Site B - 73-87 Gerry Street of the Pfizer Sites B and D site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and applicable guidance.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for Operable Unit Numbers: 01 and 03 of the Pfizer Sites B and D site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

For OU: 01

The elements of the 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 re-development.

2. Excavation

The remedy includes excavation and off-site disposal of contaminant source areas, including chlorinated volatile organic compound (CVOC) impacted soils and grossly contaminated soil, if encountered. All on-site soil which exceeds the protection of groundwater soil cleanup objectives (SCOs) for VOCs, as defined by 6 NYCRR Part 375-6.8, will be excavated to the extent feasible and transported off-site for disposal. Approximately 450 cubic yards of soil will be removed from the site. In the event that contaminants of concern remain in soil which cannot be excavated due to structural constraints of the existing building, a contingency plan will be developed to address remaining contamination. The need for an alternative approach to address any remaining contamination in soil will be determined in consultation with the Department based on physical observations and endpoint sampling results once the excavation limits have been reached. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

3. Cover System

A site cover currently exists and will be maintained to allow for restricted residential use of the site. Any site redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, and sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs for restricted residential use. Where a soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

In the areas to be excavated, the site cover will be restored as described above. The excavation within the existing building will be restored with a clean soil cover over a demarcation layer to match the existing site grade. The existing concrete slab will be maintained in the rest of the building. The excavation within the courtyard area will be restored with a concrete cover to match the existing surface.

4. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat CVOCs in groundwater. A chemical oxidant will be injected into the subsurface to oxidize the contaminants in four distinct areas which have been identified as contaminant source areas and/or where the highest concentrations of CVOCs in groundwater have been identified. The oxidant will be introduced via temporary injection points screened from approximately 10 to 25 feet below surface grade to target the CVOC-impacted interval. The concentration and dosage of oxidant will be determined during the remedial design. Post-remedial groundwater monitoring will begin once field parameters indicate that groundwater conditions have returned to baseline and will continue during Site Management to monitor the effectiveness of the remedy. The goal of the groundwater treatment is to achieve a bulk reduction in groundwater contaminant concentrations to sustained, asymptotic conditions.

5. Vapor Mitigation

Prior to construction of any future enclosed structures on the site, or the re-occupation of existing structures, a soil vapor intrusion (SVI) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed or existing structure. Alternatively, an active SVI mitigation system may be installed as an element of the building foundation without first conducting an evaluation.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

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

7. 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 deed restriction discussed in #6 above.

Engineering Controls: The site cover system and vapor mitigation systems discussed in #3 and #5 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 deed restriction including any land use, and groundwater use restrictions;

o a provision for evaluation of the potential for soil vapor intrusion should the on-site building become occupied and for any new buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion

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 groundwater to assess the performance and effectiveness of the remedy;

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

o monitoring for vapor intrusion for any buildings to be occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

For OU: 03

The elements of the 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 re-development.

2. Excavation

Excavation and off-site disposal of soils which exceed restricted residential use soil cleanup objectives (SCOs) as defined by 6 NYCRR Part 375-6.8, as follows: 10 feet below surface grade on Lots 49 and 50 and 5 feet below surface grade on Lots 46, 47, and 48. The northern portions of Lots 46, 47, and 48 (the area behind the proposed buildings) will be re-graded to accommodate the installation of a cover system as described in remedy element #3. An area of lead and mercury contaminated soil in the vicinity of boring SBB-32 on Lot 47 will be excavated to 3 feet below grade. Lot 45 will be excavated to 2 feet below surface grade in order to achieve the restricted residential use SCOs and accommodate the installation of a cover system as described in remedy element #3. In total, approximately 3,320 cubic yards of soil will be excavated to achieve the SCOs in the top two feet of exposed surface soil.

On-site soil which does not exceed the SCOs for restricted residential use of the site may be used to backfill the excavation to establish the designed grades at the site. It is anticipated that approximately 325 cubic yards of soil/fill material will be reused. If required, clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

3. Cover System

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed

the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat chlorinated volatile organic compounds (CVOCs) in groundwater. A chemical oxidant will be injected into the subsurface to oxidize the contaminants in the area of existing monitoring well MW-3, which has been identified as a hotspot area for CVOC contamination in groundwater. The oxidant will be introduced via three temporary injection points screened from approximately 10 to 25 feet below surface grade to target the CVOC-impacted interval. The concentration and dosage of oxidant and location of oxidant injection points will be determined during the remedial design. Post-remedial groundwater monitoring will begin once field parameters indicate that groundwater conditions have returned to baseline and will continue during Site Management. It has been determined that the groundwater contamination at OU-3 is emanating from OU-1.

5. Vapor Mitigation

Any future buildings on Lots 46-50 where the foundation is above the water table will be required to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from soil and/or groundwater. For future buildings where the foundation is within the water table and a sub-slab depressurization is therefore not possible, a water/vapor barrier will be installed.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

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

7. 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 deed restriction discussed in #6 above.
Engineering Controls: The site cover system and vapor mitigation systems discussed in #3 and 5 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 deed restriction including any land use, and groundwater use restrictions;
o a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on Lot 45, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
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 groundwater to assess the performance and effectiveness of the remedy;
o a schedule of monitoring and frequency of submittals to the Department;
o monitoring for vapor intrusion for any buildings to be occupied or developed 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.

February 20, 2015

Date

Robert J. Cozzy, Director
Remedial Bureau B

DECISION DOCUMENT

Pfizer Sites B and D
Brooklyn, Kings County
Site No. V00350
January 2015

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 Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." 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:

New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, NY 11101
Phone: (718) 482-4995

Brooklyn Public Library
Williamsburg Branch
240 Division Avenue
Brooklyn, NY 11211
Phone: (718) 302-3485

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going

paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The site is comprised of several properties in the southeast Williamsburg neighborhood of Brooklyn, located at the addresses 59-71 Gerry Street (aka 177 Harrison Avenue) (Block 2266, part of Lot 1 and Lot 52) defined as Operable Unit 2 (OU-2) below, 73-87 Gerry Street (Block 2266, Lots 45-50) defined as OU-3 below, and 191 Harrison Avenue and 60-66 Gerry Street (Block 2269, Lot 1) defined as OU-1 below. It should be noted that any references herein to "Pfizer Site B" and "Pfizer Site D" are names historically designated by Pfizer Inc. for their properties and do not refer to Department designated Sites or operable units.

Site Features:
The total size of the site is 1.47 acres. The property at 59-71 Gerry Street (OU-2) is currently being remediated and redeveloped with a high school for girls (Bais Ruchel High School). The property at 73-87 Gerry Street (OU-3) is currently vacant. The property at 191 Harrison Avenue and 60-66 Gerry Street (OU-1) is consists of five interconnected buildings that are currently vacant, with some paved, enclosed courtyard space. These buildings surround three sides of a condemned and vacant apartment building which is not part of the site.

Current Zoning and Land Use:
The site is located in a commercial district overlay within a residential zoning district. All portions of the property are currently vacant; however, remediation and redevelopment of OU-2 into a high school for girls is nearly complete and that building is expected to be occupied in 2015.

Past Use of the Site:
Pfizer leased what is now OU-2 (59-71 Gerry Street) from the previous owner from 1954 to 2004; aside from occasional use as a parking lot it was vacant from the 1950s until remediation and redevelopment began in 2011. OU-3 (73-87 Gerry St.) was purchased by Pfizer in 1964 and was used as a warehouse for the storage of raw materials/dry goods, spare equipment parts, and packaging materials. Prior to Pfizer's ownership, it was used as a garage and truck rental facility. OU-1 (60-66 Gerry Street) was formerly leased from Pfizer by Arlington Press, a company that specializes in labels and package inserts for the pharmaceutical industry. It is also believed that a tetrachloroethylene (PCE) reclamation facility operated at 66 Gerry Street circa 1955, prior to Pfizer ownership, based on a building permit document from that time.

Soil removal activities were performed on OU-3 in 2002 (prior to the site entering the VCP), and included the excavation of 9 Underground Storage Tanks (USTs), 2 tank-like structures, and removal of 4,735 tons of petroleum VOC-impacted soil and 18,449 gallons of groundwater

(including perched groundwater). The excavation was then backfilled with clean fill.

Operable Units:
The site has been divided into three Operable Units due to separate ownership and separate remediation and development schedules of different parcels. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination.

The property at 191 Harrison Avenue and 60-66 Gerry Street, located on the southeast corner of Gerry Street and Harrison Avenue, (known as Pfizer Site D) is Operable Unit 1 (OU-1). The property at 59-71 Gerry Street (aka 177 Harrison Ave.) or the western portion of Pfizer Site B, is OU-2. This Operable Unit is being remediated in accordance with the Department's 2011 Decision Document and developed as a high school. The property located at 73-87 Gerry Street, which is the eastern portion of Pfizer Site B, is OU-3.

Site Geology and Hydrogeology:
The site is underlain by a layer of fill material approximately 8 to 10 feet thick. Beneath the fill layer is a green clay/silt stratum of approximately 2 to 3 feet thick, followed by a brown fine to medium sand stratum with small amounts of clay and silt of approximately 15 feet. Beneath the sand is a silt/clay layer which has been identified as a confining layer. Groundwater is approximately 6 to 10 feet below surface grade. Groundwater flow direction is generally to the north, with some radial flow to the northwest.

Operable Unit (OU) Numbers 01 and 03 are the subject of this document.

A Decision Document was issued previously for OU 02.

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, at a minimum, 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 DER-10, Technical Guidance for Site Investigation and Remediation were/was evaluated.

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 voluntary cleanup agreement is with a Volunteer. If the Volunteer elects not to complete the remedial program under the VCP, the Department will make a determination if the site poses a

significant threat to human health and the environment. If the site is determined to pose a significant threat, the Department will approach the potentially responsible parties (PRPs) to implement the remedy. PRPs are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

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:

For OU: 01

VINYL CHLORIDE	TRICHLOROETHENE (TCE)
TETRACHLOROETHYLENE (PCE)	cis-1,2-Dichloroethene

For OU: 03

TETRACHLOROETHYLENE (PCE)	BENZ(A)ANTHRACENE
TRICHLOROETHENE (TCE)	Chrysene
cis-1,2-Dichloroethene	BENZO(A)PYRENE
VINYL CHLORIDE	indeno(1,2,3-cd)pyrene
LEAD	DIBENZ[A,H]ANTHRACENE
MERCURY	BARIUM
ARSENIC	CHROMIUM

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(s) has/have been completed at this site based on conditions observed during the RI.

Interim Remedial Measures OU3

Following the removal of underground storage tanks (USTs) and petroleum-impacted soil and groundwater on OU3 in 2002 (prior to the Voluntary Cleanup Agreement), an air sparge/soil vapor extraction (AS/SVE) system was installed to address residual VOC contamination in groundwater due to the previous on-site sources. The AS/SVE system operated from October 2006 through February 2011 and removed approximately 159 pounds of VOCs. The system was shut down once VOC recovery levels became asymptotic. Remaining VOCs in groundwater on OU3 are primarily

chlorinated solvents which have been attributed to an off-site source on OU1, and will be addressed through additional remedial action.

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.

Contamination is described separately for each of the Operable Units (OUs) to be addressed by this remedy. For a description of the Operable Units please refer to the Site Description.

Nature and Extent of Contamination - OU-1:
Although soil and groundwater were tested for VOCs, SVOCs, metals, PCBs, and pesticides, the primary contaminants of concern in all media on OU-1 are chlorinated volatile organic compounds (VOCs).

Soil - Chlorinated VOCs were detected in soil at elevated levels in a discrete area beneath the eastern portion of OU-1, primarily 8 to 15 feet below grade (fbg). Tetrachloroethene (PCE) was detected in 4 soil borings at a maximum concentration of 280 parts per million (ppm), compared to the Protection of Groundwater Soil Cleanup Objective (PGWSCO) of 1.3 ppm. Trichloroethene (TCE) was detected in 3 soil borings at a maximum concentration of 4.2 ppm, compared to the PGWSCO of 0.47 ppm. Cis-1,2-dichloroethene (DCE) was detected in 5 borings at a maximum concentration of 120 ppm, compared to the PGWSCO of 0.25 ppm. Vinyl chloride was detected in 4 borings at a maximum of 1.2 ppm, compared to the PGWSCO of 0.02 ppm. Some metals and semi-volatile organic compounds (SVOCs) were detected in soil above the restricted-residential use SCOs, but are not considered contaminants of concern. Site-related soil contamination is not expected to extend off-site based on the available data.

Groundwater - The same chlorinated VOCs that are present in soil are also present at elevated concentrations in the groundwater beneath OU-1, in similar locations as the contaminated soil. The highest concentrations are present in the 9-19 fbg depth range, with contaminants detected at lesser concentrations in deeper intervals. During recent groundwater monitoring, PCE was detected as high as 16,600 parts per billion (ppb); TCE as high as 2,710 ppb; cis-DCE as high as 29,300 ppb, and vinyl chloride as high as 3,120 ppb. The applicable groundwater standard for these contaminants is 5 ppb for PCE, TCE, and cis-DCE and 2 ppb for vinyl chloride. Groundwater contamination presently migrates off-site.

Soil vapor - Chlorinated VOCs are present in soil vapor at elevated concentrations throughout OU-1. Near the source of contamination beneath the paved courtyard, PCE was detected in soil vapor at 37,000 micrograms per cubic meter (µg/m3); TCE was detected at 4,700 µg/m3; and cis-DCE at 1,500 µg/m3. These contaminants were also present in soil vapor samples closer to the site boundaries, but at much lesser concentrations which were seen to decrease with increasing distance from the contaminated soil and groundwater. In off-site samples, PCE was detected as high as 430

µg/m3 at the vacant, unpaved lot to the east of the site; 38 µg/m3 in the sidewalk to the south of the site (the northeastern sidewalk of Bartlett Street); and 76 µg/m3 in the sidewalk to the southwest of the site (beneath the northeastern sidewalk of Harrison Avenue). No significant impacts were observed outside of the high school across Harrison Ave.

Nature and Extent of Contamination - OU-3:
Soil and groundwater were tested for VOCs, SVOCs, metals, PCBs, and pesticides. The primary contaminants of concern on OU-3 are chlorinated VOCs in groundwater and soil vapor, and SVOCs and metals related to historic fill in the soil.

Soil - VOCs in soil at OU-3 were addressed under previous remedial actions. Soil removal activities were performed in 2002, prior to entry in the Department's VCP. Some semi-volatile organic compounds (SVOCs) and metals are still present in shallow soil (0 to 2 fbg) on OU-3, in areas that were not previously excavated. Metals include lead as high as 2,020 parts per million (ppm), mercury as high as 61.4 ppm, arsenic as high as 307 ppm, barium as high as 1,250 ppm, and chromium as high as 75.7 ppm. SVOCs include benzo(a)anthracene as high as 75 ppm, chrysene as high as 87 ppm, benzo(a)pyrene as high as 59 ppm, indeno(1,2,3-cd)pyrene as high as 43 ppm, and dibenz(a,h)anthracene as high as 25 ppm. These contaminants exceed their respective soil cleanup objectives for restricted residential use. Site-related soil contamination is not expected to extend off-site based on the available data.

Groundwater - In 2006, an air sparge/soil vapor extraction (AS/SVE) system was installed to address groundwater contamination remaining at the site following the soil and tank excavations. The system was operated from October, 2006 to February, 2011. Quarterly groundwater monitoring performed during that time period indicated that the system was effective at treating petroleum-related VOCs in groundwater. The primary contaminants of concern remaining in groundwater following operation of the AS/SVE system are chlorinated VOCs, which are present in the northeast corner of the site. During the most recent groundwater monitoring, PCE was detected at 128 ppb; TCE at 221 ppb; cis-DCE at 1,410 ppb; and vinyl chloride at 14.8 ppb. It has been determined that these contaminants in groundwater at OU-3 are originating at OU-1. There is no off-site migration of contaminated groundwater that originates from OU-3 specifically. Contaminated groundwater emanating from OU-1 migrates toward OU-3 and further downgradient of OU-3.

Soil vapor – Recent soil vapor data is limited in regard to overall site coverage. Two soil vapor sampling points in the northwestern portion of OU-3 were monitored quarterly from August, 2010 through February, 2012. During the last sampling event from these locations, PCE was detected at 19 µg/m3 with other VOCs at lower concentrations. Directly across the street from and upgradient of the site (beneath the southwestern sidewalk of Gerry Street, just outside the boundary of OU-1), PCE was detected in soil vapor at 76,000 µg/m3.

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.*

Direct contact with contaminated soils or contaminated groundwater is not likely because the majority of the site is covered with buildings and pavement. People may contact site-related contaminants if they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in contaminated soil or contaminated groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site-related contaminants in indoor air due to soil vapor intrusion on-site. Environmental sampling indicates that soil vapor intrusion is not a concern for off-site structures.

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:

For OU 01:

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.

For OU 03:

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.

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.

For OU 01: Site D - 191 Harrison Ave, 60-66 Gerry St, the selected remedy is referred to as the Source Material Excavation and Groundwater Treatment remedy.

The elements of the selected remedy, as shown in Figure 2, for OU: 01 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 re-development.

2. Excavation

The remedy includes excavation and off-site disposal of contaminant source areas, including chlorinated volatile organic compound (CVOC) impacted soils and grossly contaminated soil, if encountered. All on-site soil which exceeds the protection of groundwater soil cleanup objectives (SCOs) for VOCs, as defined by 6 NYCRR Part 375-6.8, will be excavated to the extent feasible and transported off-site for disposal. Approximately 450 cubic yards of soil will be removed from the site. In the event that contaminants of concern remain in soil which cannot be excavated due to structural constraints of the existing building, a contingency plan will be developed to address remaining contamination. The need for an alternative approach to address any remaining contamination in soil will be determined in consultation with the Department based on physical observations and endpoint sampling results once the excavation limits have been reached. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

3. Cover System

A site cover currently exists and will be maintained to allow for restricted residential use of the site. Any site redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, and sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs for restricted residential use. Where a soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

In the areas to be excavated, the site cover will be restored as described above. The excavation within the existing building will be restored with a clean soil cover over a demarcation layer to match the existing site grade. The existing concrete slab will be maintained in the rest of the building. The excavation within the courtyard area will be restored with a concrete cover to match the existing surface.

4. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat CVOCs in groundwater. A chemical oxidant will be injected into the subsurface to oxidize the contaminants in four distinct areas which have been identified as contaminant source areas and/or where the highest concentrations of CVOCs in groundwater have been identified. The oxidant will be introduced via temporary injection points screened from approximately 10 to 25 feet below surface grade to target the CVOC-impacted interval. The concentration and dosage of oxidant will be determined during the remedial design. Post-remedial groundwater monitoring will begin once field parameters indicate that groundwater conditions have returned to baseline and will continue during Site Management to monitor the effectiveness of the remedy. The goal of the groundwater treatment is to achieve a bulk reduction in groundwater contaminant concentrations to sustained, asymptotic conditions.

5. Vapor Mitigation

Prior to construction of any future enclosed structures on the site, or the re-occupation of existing structures, a soil vapor intrusion (SVI) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed or existing structure. Alternatively, an active SVI mitigation system may be installed as an element of the building foundation without first conducting an evaluation.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

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

7. 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 deed restriction discussed in #6 above.

Engineering Controls: The site cover system and vapor mitigation systems discussed in #3 and #5 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 deed restriction including any land use, and groundwater use restrictions;
o a provision for evaluation of the potential for soil vapor intrusion should the on-site building become occupied and for any new buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion
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 groundwater to assess the performance and effectiveness of the remedy;
o a schedule of monitoring and frequency of submittals to the Department;
o monitoring for vapor intrusion for any buildings to be occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

For OU 03: Eastern portion of Site B - 73-87 Gerry Street, the selected remedy is referred to as the Site Cover and Groundwater Treatment remedy.

The elements of the selected remedy, as shown in Figures 3-6, for OU: 03 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 re-development.

2. Excavation
Excavation and off-site disposal of soils which exceed restricted residential use soil cleanup objectives (SCOs) as defined by 6 NYCRR Part 375-6.8, as follows: 10 feet below surface grade on Lots 49 and 50 and 5 feet below surface grade on Lots 46, 47, and 48. The northern portions of Lots 46, 47, and 48 (the area behind the proposed buildings) will be re-graded to accommodate the installation of a cover system as described in remedy element #3. An area of lead and mercury

contaminated soil in the vicinity of boring SBB-32 on Lot 47 will be excavated to 3 feet below grade. Lot 45 will be excavated to 2 feet below surface grade in order to achieve the restricted residential use SCOs and accommodate the installation of a cover system as described in remedy element #3. In total, approximately 3,320 cubic yards of soil will be excavated to achieve the SCOs in the top two feet of exposed surface soil.

On-site soil which does not exceed the SCOs for restricted residential use of the site may be used to backfill the excavation to establish the designed grades at the site. It is anticipated that approximately 325 cubic yards of soil/fill material will be reused. If required, clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

3. Cover System

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat chlorinated volatile organic compounds (CVOCs) in groundwater. A chemical oxidant will be injected into the subsurface to oxidize the contaminants in the area of existing monitoring well MW-3, which has been identified as a hotspot area for CVOC contamination in groundwater. The oxidant will be introduced via three temporary injection points screened from approximately 10 to 25 feet below surface grade to target the CVOC-impacted interval. The concentration and dosage of oxidant and location of oxidant injection points will be determined during the remedial design. Post-remedial groundwater monitoring will begin once field parameters indicate that groundwater conditions have returned to baseline and will continue during Site Management. It has been determined that the groundwater contamination at OU-3 is emanating from OU-1.

5. Vapor Mitigation

Any future buildings on Lots 46-50 where the foundation is above the water table will be required to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from soil and/or groundwater. For future buildings where the foundation is within the water table and a sub-slab depressurization is therefore not possible, a water/vapor barrier will be installed.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

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

7. 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 deed restriction discussed in #6 above.
Engineering Controls: The site cover system and vapor mitigation systems discussed in #3 and 5 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 deed restriction including any land use, and groundwater use restrictions;
o a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on Lot 45, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
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 groundwater to assess the performance and effectiveness of the remedy;
o a schedule of monitoring and frequency of submittals to the Department;
o monitoring for vapor intrusion for any buildings to be occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Figure 1 - Site Location Map

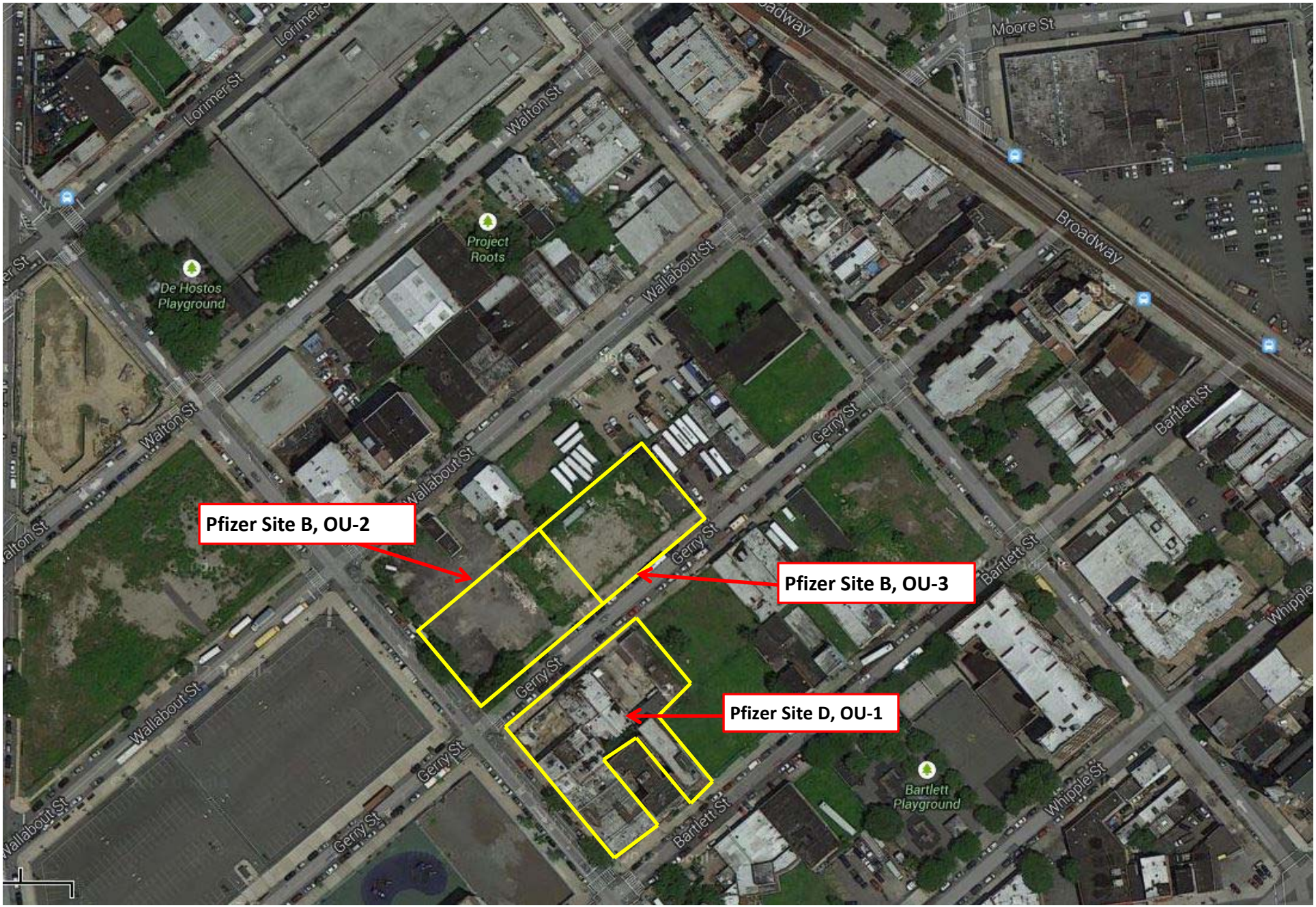
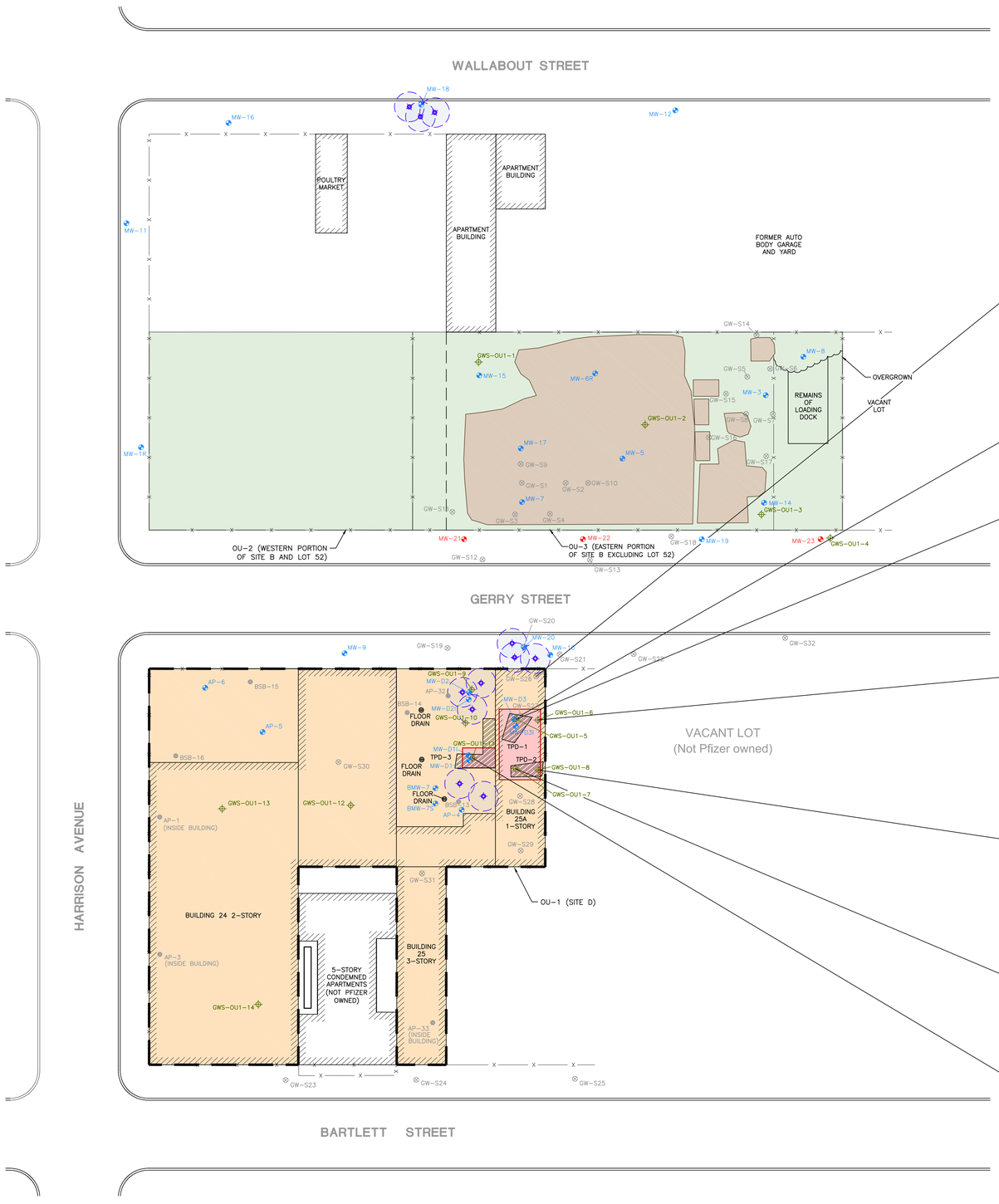


Figure 2: Remedial Elements for OU-1



GW-S26	8/10/10	8/10/10	8/10/10	8/10/10
Analyte	9-11	15-17	19-21	25-27
1,1-Dichloroethene	0.0057 U	0.0054 U	0.0051 U	0.0058 U
cis-1,2-Dichloroethene	0.0057 U	0.0055	**0.32**	0.0058 U
Tetrachloroethene	0.0057 U	0.0054 U	0.0051 U	0.0058 U
trans-1,2-Dichloroethene	0.0057 U	0.0054 U	0.0051 U	0.0058 U
Trichloroethene	0.0057 U	0.0054 U	0.0051 U	0.0058 U
Vinyl chloride	0.0057 U	0.0054 U	**0.05**	0.0058 U

GW-S27	8/10/10	8/10/10	8/10/10	8/10/10	8/11/10
Analyte	9-11	15-17	21-23	25-27	30-32
1,1-Dichloroethene	1.1 U	0.0057 U	0.0055 U	0.0061 U	0.006 U
cis-1,2-Dichloroethene	**120**	**0.29**	0.19	0.0061 U	0.006 U
Tetrachloroethene	**2.2**	0.059	0.15	0.0061 U	0.006 U
trans-1,2-Dichloroethene	1.1 U	0.0057 U	0.0055 U	0.0061 U	0.006 U
Trichloroethene	**2.7**	0.0057 U	0.0055 U	0.0061 U	0.006 U
Vinyl chloride	**1.2**	0.0057 U	0.0062	0.0061 U	0.006 U

GWS-OU1-5	6/28/12	6/28/12
Analyte	8-10	25-30
1,1-Dichloroethene	0.12 U	0.0023 U
cis-1,2-Dichloroethene	**6**	0.0023 U
Tetrachloroethene	**8.6**	0.0023 U
trans-1,2-Dichloroethene	0.12 U	0.0023 U
Trichloroethene	**4.2**	0.0023 U
Vinyl chloride	0.12 U	0.0023 U

GWS-OU1-6	6/29/12	6/29/12	6/29/12
Analyte	9-11	13-15	20-22
1,1-Dichloroethene	0.0029 U	0.0023 U	0.0025 U
cis-1,2-Dichloroethene	0.0085	0.029	0.0099
Tetrachloroethene	0.0051	0.0023 U	0.24 JV
trans-1,2-Dichloroethene	0.0029 U	0.0023 U	0.0025 U
Trichloroethene	0.0029 U	0.0023 U	0.038 JV
Vinyl chloride	**0.048**	0.0023 U	0.0025 U

GWS-OU1-8	6/29/12
Analyte	10-15
1,1-Dichloroethene	0.0025 U
cis-1,2-Dichloroethene	**4.5**
Tetrachloroethene	0.0056
trans-1,2-Dichloroethene	0.015
Trichloroethene	0.0025 U
Vinyl chloride	0.014

GWS-OU1-7	6/28/12	6/28/12
Analyte	6-10	10-13
1,1-Dichloroethene	0.12 U	0.13 U
cis-1,2-Dichloroethene	**12**	**8.5**
Tetrachloroethene	**6.7**	**1.5 JV**
trans-1,2-Dichloroethene	0.12 U	0.13 U
Trichloroethene	**0.51**	0.45 JV
Vinyl chloride	0.12 U	**0.16**

GWS-OU1-11	7/3/12	7/3/12	7/3/12	7/3/12
Analyte	14-15	15-16	20-22	25-30
1,1-Dichloroethene	1.1 U	0.11 U	0.0024 U	0.0027 U
cis-1,2-Dichloroethene	1.1 U	0.11 U	0.0024 U	0.0027 U
Tetrachloroethene	**280**	**5.7 JV**	0.012	0.0088
trans-1,2-Dichloroethene	1.1 U	0.11 U	0.0024 U	0.0027 U
Trichloroethene	1.1 U	0.11 U	0.0024 U	0.0027 U
Vinyl chloride	1.1 U	0.11 U	0.0024 U	0.0027 U

LEGEND

- EXISTING BUILDINGS OR STRUCTURES
- MW-19 — LOCATION AND DESIGNATION OF EXISTING MONITORING WELL
- MW-21 — PROPOSED LOCATION AND DESIGNATION OF MONITORING WELL
- GWS-OU1-1 — LOCATION AND DESIGNATION OF DISCRETE GROUNDWATER/SOIL SAMPLING POINT
- BSB-13 — LOCATION AND DESIGNATION OF PREVIOUS SOIL SAMPLING POINT
- GW-S5 — LOCATION AND DESIGNATION OF PREVIOUS DISCRETE GROUNDWATER/ SOIL SAMPLING POINT
- SURVEYED LATERAL EXTENT OF EXCAVATION INCLUDING TEST PITS NO.1 THROUGH NO.3, INTERIM REMEDIAL MEASURE PROGRAM
- SITE D (FORMER ARLINGTON PRESS)
- SITE B
- TPD-1 — LOCATION AND DESIGNATION OF TEST PITS COMPLETED DURING OU-1 REMEDIAL INVESTIGATION
- FORMER PFIZER PROPERTY LINE
- FENCE
- PROPOSED LOCATION OF SITE D REMEDIAL EXCAVATION
- PROPOSED LOCATION OF IN SITU CHEMICAL OXIDATION INJECTION POINT AND APPROXIMATE AREA OF INFLUENCE

TYPICAL DATABOX INFORMATION

GWS-OU1-8	6/29/12
Analyte	10-15
1,1-Dichloroethene	0.0025 U
cis-1,2-Dichloroethene	**4.5**
Tetrachloroethene	0.0056
trans-1,2-Dichloroethene	0.015
Trichloroethene	0.0025 U
Vinyl chloride	0.014

SAMPLE DESIGNATION — SAMPLING DATE

APPROXIMATE SAMPLE DEPTH (FT BLS)

CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 (mg/kg)
1,1-Dichloroethene	0.33
cis-1,2-Dichloroethene	0.25
Tetrachloroethene	1.3
trans-1,2-Dichloroethene	0.19
Trichloroethene	0.47
Vinyl chloride	0.02

mg/kg – MILLIGRAMS PER KILOGRAM

NYSDEC – NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PART 375 – 6 NYCRR PART 375 PROTECTION OF GROUNDWATER CRITERIA

J – ESTIMATED VALUE

U – INDICATES THAT THE COMPOUND WAS ANALYZED FOR BUT NOT DETECTED

V – VALUE ALTERED OR QUALIFIER ADDED DURING DATA VALIDATION

NJ – DETECTION IS TENTATIVE IN IDENTIFICATION AND ESTIMATED IN VALUE

UJ – ANALYTE WAS NOT DETECTED. THE ASSOCIATED REPORTED QUANTITATION LIMIT IS AN ESTIMATE

VOCs – VOLATILE ORGANIC COMPOUNDS

NE – NO EXCEEDANCE

ND – THERE WERE NO DETECTIONS FOR ANY COMPOUND IN THE SELECTION

BOLD – CONCENTRATION EXCEEDS NYSDEC PART 375 PROTECTION OF GROUNDWATER CRITERIA

FT BLS – FEET BELOW LAND SURFACE

30' 0 30'

Title:

PROPOSED REMEDIAL ACTION LAYOUT

SITE B AND SITE D OU-1 RAWP

Prepared For:

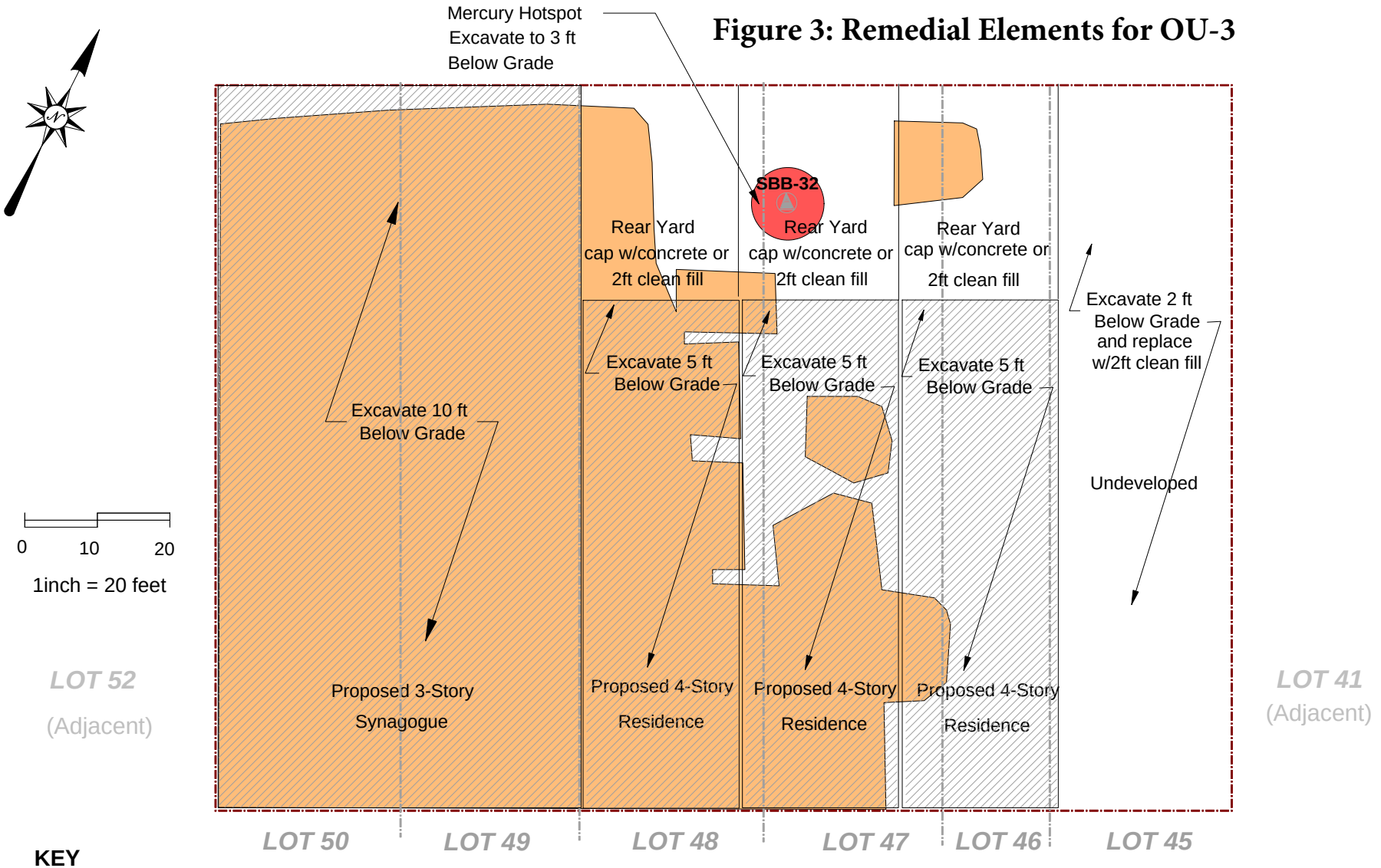
PFIZER INC
BROOKLYN, NEW YORK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: W.K.	Date: 04SEPT14	PLATE
Prepared by: G.M.	Scale: AS SHOWN	7
Project Mgr: W.K.	Project: 0047.0044Y040	
File: 0047.0044Y605R.04.DWG		

V:\CAD\PROJECTS\0047\Y\0044Y\605R\0047.0044Y605R.04.DWG

Figure 3: Remedial Elements for OU-3



KEY

Property Line

Areas Excavated / Backfilled Under IRM

SBB-32 RI Soil Boring 3/29/04

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

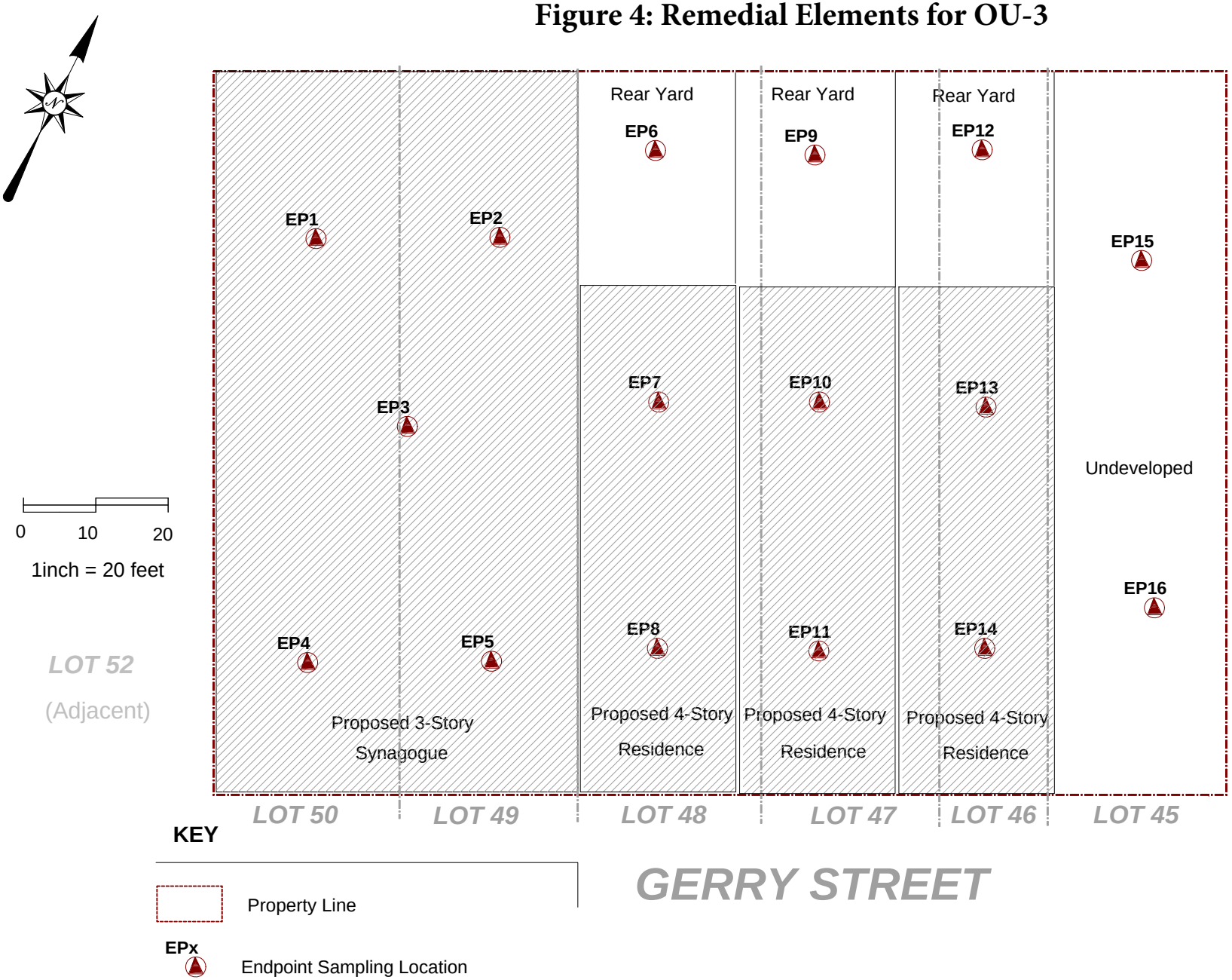
Figure No. 4

Site Name: OU3 - Pfizer Site B

Site Address: 73-87 Gerry Street, Brooklyn, NY

Drawing Title: Redevelopment and Excavation Plan

Figure 4: Remedial Elements for OU-3

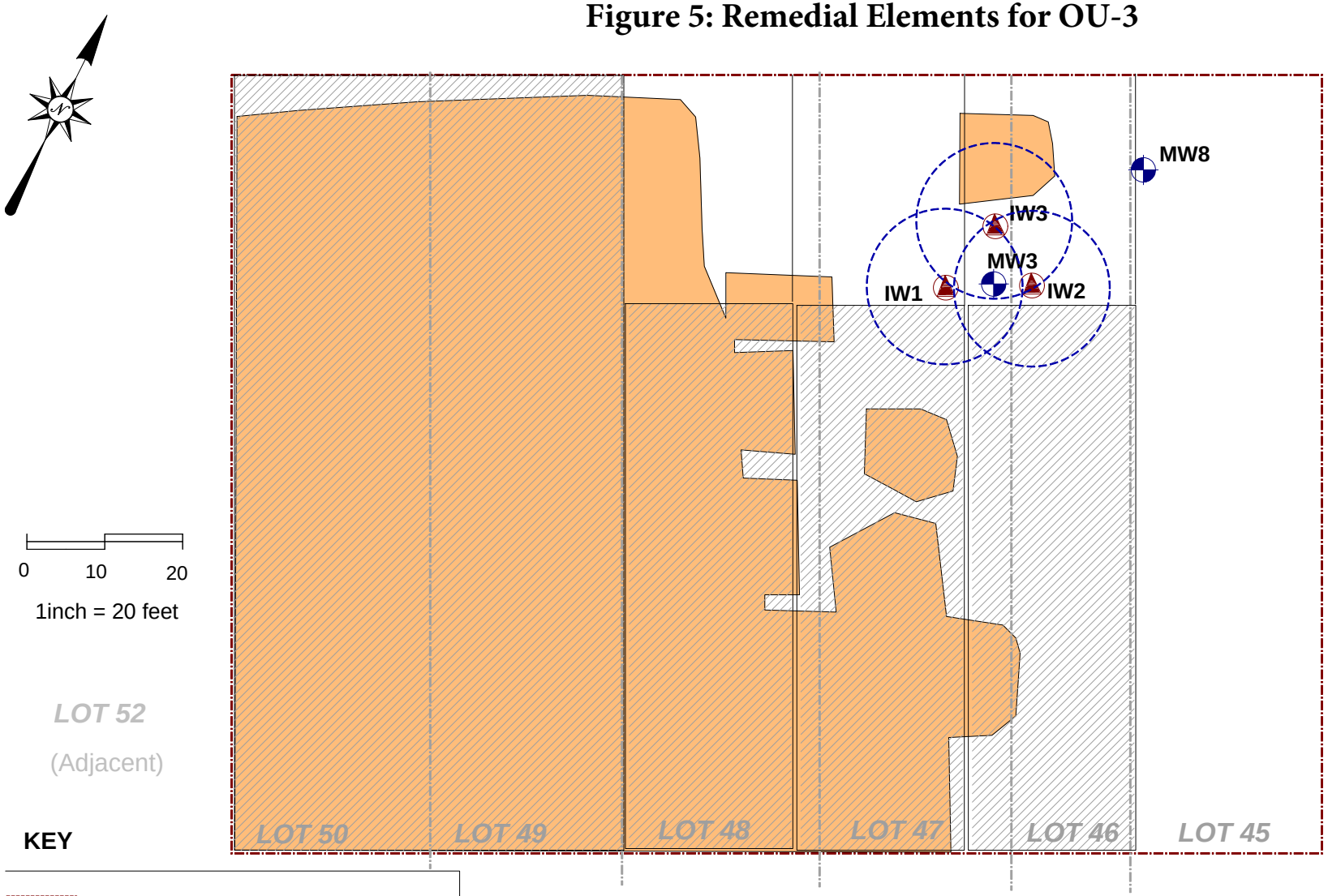


EBC
Environmental Business Consultants
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 5

Site Name: OU3 - Pfizer Site B
Site Address: 73-87 Gerry Street, Brooklyn, NY
Drawing Title: Endpont Sampling Locations

Figure 5: Remedial Elements for OU-3

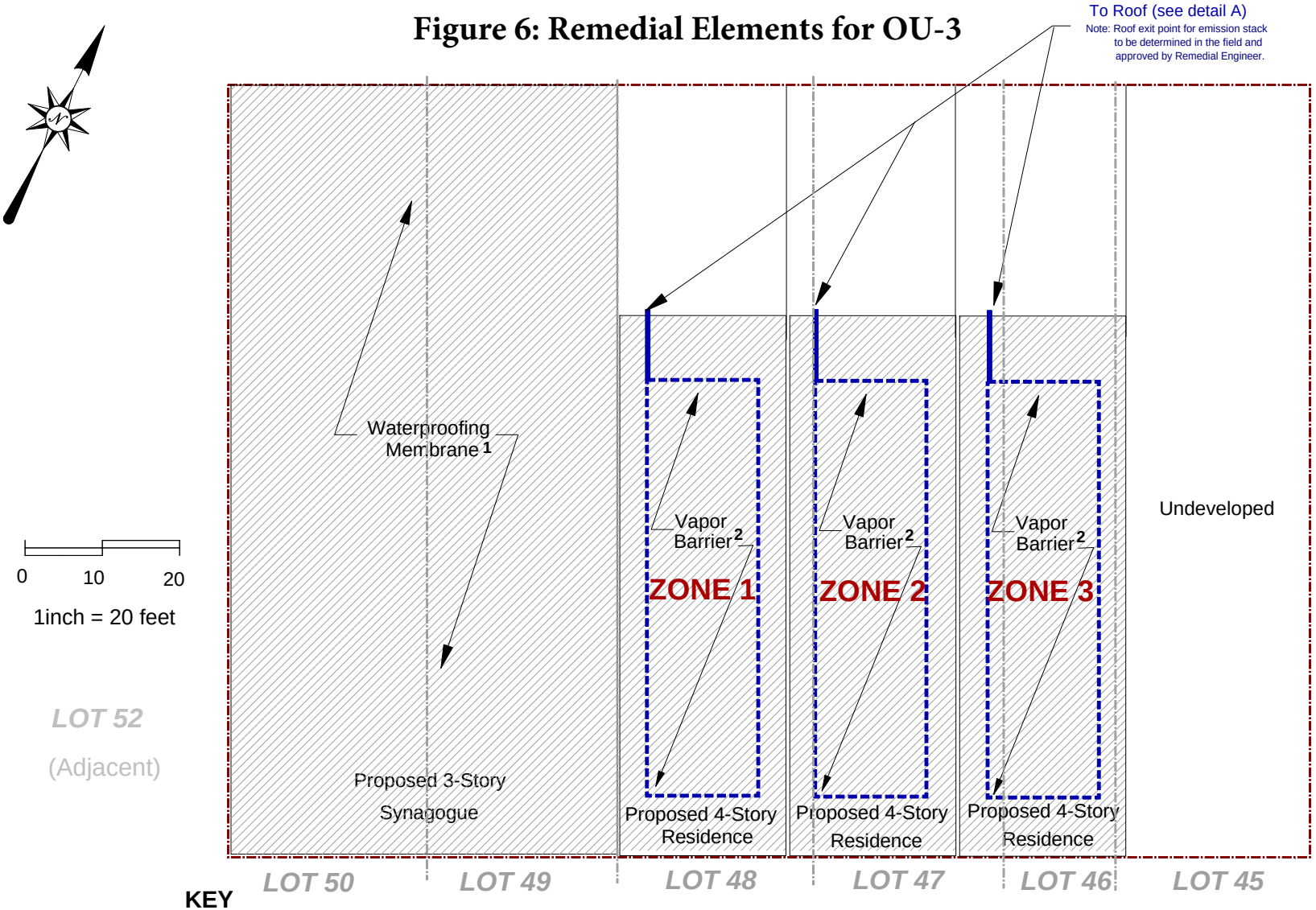


EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 6

Site Name: OU3 - PFIZER SITE B
Site Address: 73-87 GERRY STREET, BROOKLYN, NY
Drawing Title: ISCO INJECTION PLAN

Figure 6: Remedial Elements for OU-3



KEY

Property Line

4" HDPE Perforated Drain Line

1 Preprufe 300 or Approved Equal

2 20 Mil Vapor Bloc20 or Approved Equal

AMC Engineering
99 Jericho Turnpike, Suite 300J
Jericho, NY 11590

Figure No.
SSD1

Site Name: OU3 - Pfizer Site B
Site Address: 73-87 Gerry Street, Brooklyn, NY
Drawing Title: SSDS Layout