

# RECORD OF DECISION

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K - Dangman Park MGP  
Operable Unit Number 01 (OU-1): Remedial Program  
State Superfund Project  
Brooklyn, Kings County  
Site No. 224047  
January 2024



**Department of  
Environmental  
Conservation**

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

# **DECLARATION STATEMENT - RECORD OF DECISION**

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K - Dangman Park MGP  
Operable Unit Number: 01  
State Superfund Project  
Brooklyn, Kings County  
Site No. 224047  
January 2024

## **Statement of Purpose and Basis**

This document presents the remedy for Operable Unit Number: 01: Remedial Program of the K - Dangman Park MGP site, a Class A disposal 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, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for Operable Unit Number: 01 of the K - Dangman Park MGP site and the public's input to the proposed remedy presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

## **Description of Selected Remedy**

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the above referenced site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or feasibility study (FS). The IRM(s) undertaken at this site are discussed in Section 6.2.

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation presented here, the Department has selected No Further Action as the remedy for OU-1 of the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the IRM already completed and the institutional and engineering **controls** are listed below:

The elements of the selected remedy are as follows:

Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation presented here; the Department is proposing No Further Action with the implementation of engineering and institutional controls as the proposed remedy for OU-1 of the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5 of the ROD. The elements of the IRM already completed are discussed in Section 6.2 of this ROD, while the institutional and engineering controls are listed below:

### 1. Cover System

A site cover currently exists on OU-1 of the site, comprised of the new building slab and vapor barrier, paved surface parking areas, sidewalks or soil where the upper two feet of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for restricted residential use. The site cover will be maintained to allow for restricted residential use of the site. Any site redevelopment will include a site cover. 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).

### 2. 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 and commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;
- prohibits agriculture or vegetable gardens on the controlled property; and
- require compliance with the Department approved Site Management Plan.

### 3. Groundwater Monitoring

Groundwater monitoring will be required along the perimeter of OU-1 to assess groundwater conditions near the in-situ treatment zone. Samples will be analyzed for all contaminants of concern and will include analysis for the bioremediation parameters dissolved oxygen and oxidation/reduction potential.

#### 4. Site Management Plan

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

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

Institutional Controls: The Environmental Easement discussed in Paragraph 2 above.

Engineering Controls: The cover system discussed in Paragraph 1 above.

This Institutional and Engineering Control Plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a provision for further investigation and remediation of Area 2, as described in Section 6.2, should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible. The nature and extent of contamination in areas where access was previously limited or unavailable will be immediately and thoroughly investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department determination of the need for a remedy, a Remedial Action Work Plan (RAWP) will be developed for the final remedy for the site, including removal and/or treatment of any source areas to the extent feasible. Citizen Participation Plan (CPP) activities will continue through this process. Any necessary remediation will be completed prior to, or in association with, redevelopment;
- 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 buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 1 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

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

**New York State Department of Health Acceptance**

The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

**Declaration**

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

January 13, 2024  
Date

*Andrew Guglielmi*  
Andrew O. Guglielmi, Director  
Division of Environmental Remediation

# RECORD OF DECISION

K - Dangman Park MGP  
Brooklyn, Kings County  
Site No. 224047  
January 2024

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## **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 hazardous wastes at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or feasibility study (FS). The IRMs undertaken at OU-1 are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment. The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the remedy selected by this Record of Decision (ROD). A No Further Action remedy may include site management, which will include continued operation of any remedial system installed during the IRM and the implementation of any prescribed controls that have been identified as being part of the remedy for the site. This ROD identifies the IRM(s) conducted and discusses the basis for No Further Action.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

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

## **SECTION 2: CITIZEN PARTICIPATION**

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

available for review by the public at the following document repositories:

NYSDEC Central Office  
Attn: John Miller  
625 Broadway Floor 12  
Albany, NY 12233-7014  
Phone: 518-402-9589

Brooklyn Community Board 13  
1201 Surf Ave Floor 3  
Brooklyn, NY 11224  
Phone: 718-266-3001

A public meeting was also conducted. At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) were presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the ROD.

### **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 Dangman Park MGP site is located in an urban area, in Coney Island, Brooklyn. The site totals approximately 1 acre of land bounded by Neptune Ave to the north, W. 5th St. to the east, a residential parcel to the south, and a commercial parcel to the west. The site is contained within two tax lots of Block 7273, the lot 1001 property (formerly lot 1R) and the lot 25 property. The lot 1001 property is designated as operable unit 1(OU1) and a portion of the parking area on lot 25 is designated as operable unit 2 (OU2).

**Site Features:** A large portion of the former shopping center was demolished which allowed for interim remediation activities and redevelopment. Following remediation, a one-story commercial structure was constructed on OU-1 which houses various businesses including a bank, a bagel shop and a drug store. The site is approximately 1,300 feet southeast of Coney Island Creek and approximately 2,400 feet north of New York Bay.

Current Zoning and Land Use: The site is zoned for residential and commercial uses. The surrounding parcels are currently used for a combination of commercial and residential. The site is located within a special purpose zoning district designated as the "Special Ocean Parkway District."

Past Use of the Site: A manufactured gas plant (MGP) operated on-site from approximately 1895 until sometime between 1906 and 1930. As a result of the MGP operations, coal tar has impacted the subsurface soil and groundwater on parts of the site. The above-grade MGP structures were removed sometime between 1906 and 1930. The below grade portions of the former gas holders, tar tank, and cistern are all likely sources of the tar releases from the former MGP. By 1930, the site was occupied by a club house. By 1966, the Trump Village Shopping Center occupied the northern and central portions of the site. During the winter of 2016-2017, a substantial part of the Trump Village Shopping Center was demolished to make way for new development, making the underlying contamination available for cleanup.

Site Geology and Hydrogeology: The subsurface soils under the site consist of approximately 5 to 15 feet of fill material overlying glacial sand deposits. The groundwater table is approximately 6.5 to 7.5 feet below ground surface and ground water flows northwest, toward Coney Island Creek.

Operable Unit (OU) Number 01 is the subject of this document.

A Record of Decision will be issued for OU 02 in the future.

A site location map is attached as Figure 1. The site boundary is shown on Figure 2.

#### **SECTION 4: LAND USE AND PHYSICAL SETTING**

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

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

#### **SECTION 5: ENFORCEMENT STATUS**

Potentially Responsible Parties (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.

The PRPs for the site, documented to date, include:



The Brooklyn Union Gas Company, d/b/a National Grid, NY

The Department and The Brooklyn Union Gas Company, Keyspan Energy Delivery NY, KeySpan Gas East Corporation d/b/a and KeySpan Energy Delivery Long Island entered into a Consent Order (Index #A2-0552-0606) on February 22, 2007. The Order obligates the responsible parties to implement a full remedial program. As a successor to KeySpan, National Grid remains bound by the terms of this consent order.

Non-MGP contamination was also found in soil vapor samples. There is currently insufficient data to conclusively determine whether this site is the source of the chlorinated organic compounds identified.

On-site and off-site contamination unrelated to the former MGP activities identified during the environmental investigations will be addressed separately by the NYSDEC. The responsible party, in accordance with the Order on Consent, is not responsible for non-MGP related contamination.

## **SECTION 6: SITE CONTAMINATION**

### **6.1: Summary of the Remedial Investigation**

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor
- indoor air
- sub-slab vapor

### **6.1.1: Standards, Criteria, and Guidance (SCGs)**

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

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCG in the footnotes. 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 hazardous waste 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 in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

coal tar	benzene, toluene, ethylbenzene and xylenes
polycyclic aromatic hydrocarbons	(BTEX)
(PAHS), total	tetrachloroethene (PCE)

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

### **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 Record of Decision.

The following IRM(s) has/have been completed at OU-1 of the site based on conditions observed during the RI.

#### **Interim Remedial Measure**

In 2017 several interim remedial measures were implemented to address coal tar contamination at the site.

## Soil Excavation

Excavation was implemented at the site to remove accessible coal tar saturated soils. In general, excavation was targeted for areas where significant shallow contamination was observed during the RI. The goal was to remove contamination that was present within the top fifteen feet of the ground surface. Three areas were initially identified for removal as shown on Figure 4. However, "Area 2" was not excavated as planned. (See note 4 in Figure 4)

"Area 1" consisted of three discrete locations (1A, 1B, 1C) associated with the northwest gas holder and cistern areas. Excavation was completed to approximately fifteen feet at each location for a total removal of approximately 429 cubic yards of impacted soil.

"Area 3" is located in the former southern gas holder. This area is also where numerous fuel oil tanks had existed historically. Contamination in this area was identified in the upper fifteen feet and included soil saturated with coal tar and petroleum. Approximately 823 cubic yards of soil was removed. In addition, about 16,000 pounds of gypsum added to the backfilled area to enhance future degradation of remaining impacted soils at the site.

## Gypsum Injections

Anaerobic oxidation of contaminant source material was completed using injections of gypsum slurry. The gypsum stimulates the existing bacteria to accelerate the degradation of petroleum and MGP related contaminants. The gypsum was injected at 58 locations over an area of approximately 15,000 square feet. The treatment depth was from approximately seven feet to 15 feet below grade over the treatment area. In total approximately 58,500 pounds of gypsum was injected to the treatment area. See Figure 3.

A detailed description of the IRMs can be found in the site's June 2020 IRM Construction Completion report.

### **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.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

## Nature and Extent of Contamination:

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs) and pesticides. Based upon investigations conducted to date, the primary contaminant of concern is coal tar and its associated compounds including benzene, toluene, ethylbenzene and xylene (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

**Soil:** Coal tar impacts have caused exceedances of both unrestricted soil cleanup objectives (SCOs) and restricted residential SCOs. Coal tar impacts were observed in areas generally within the footprint of the former MGP operations and areas located directly downgradient of those operations. Coal tar saturated or coated soil was not observed within the first five feet below ground surface (bgs) in any of the soil borings. Several soil borings contained MGP coal tar saturated soil within the first fifteen feet bgs, with most of the heavy soil contamination being observed at depths greater than fifteen feet across the site. Coal tar impacted soil within the first fifteen feet bgs was removed during the IRMs discussed in Section 6.2.

BTEX and PAH compounds were generally detected in soil samples that corresponded with areas of visual coal tar and petroleum hydrocarbon impacts. The highest levels of BTEX and PAHs were observed in a sample collected from soil boring SB-9, at the 72-73.5-foot interval. This sample contained 1,629 parts per million (ppm) of total BTEX with concentrations of benzene at 19 ppm, toluene at 550 ppm, ethylbenzene at 320 ppm and xylene at 740 ppm. These concentrations exceed the restricted residential use SCOs of 4.8 ppm, 100 ppm, 41 ppm and 100 ppm, respectively for the compounds. The same depth interval in SB-9 contained 6,046 ppm of total PAHs, which exceeds the 500 ppm SCO guideline for total PAHs. Some of the most frequently detected PAHs included chrysene at a maximum concentration of 260 ppm, benzo(a)pyrene at a maximum concentration of 330 ppm and indeno(1,2,3-cd)pyrene at 200 ppm. Limited coal tar contamination has migrated off-site to the west and was observed at a depth of approximately 70 feet.

**Groundwater:** Coal tar and petroleum hydrocarbon impacts were detected in groundwater during the RI at concentrations above groundwater quality standards (GWQS). The highest BTEX and PAH concentrations in groundwater were detected in MW-5 and MW-11, each screened from 30 to 40 ft bgs. Pre-IRM, MW-5 had total BTEX and PAH concentrations of 25,000 parts per billion (ppb) and 12,000 ppb, respectively. Pre-IRM, MW-11 had total BTEX and PAH concentrations of 2,160 and 6,520 ppb respectively. Both wells are located near historic MGP structures including the former gas holders and tar tank. Pre-IRM maximum concentrations of BTEX detected in groundwater were benzene at 6,800 ppb (GWQS of 1 ppb), toluene at 10,000 ppb (GWQS of 5 ppb), ethylbenzene at 5,300 ppb (GWQS of 5 ppb) and xylene at 2,900 ppb (GWQS of 5 ppb). Naphthalene (GWQS of 10 ppb) and acenaphthene (GWQS of 20 ppb) were the primary PAHs detected in groundwater, with maximum detections of 12,000 ppb and 450 ppb, respectively. Groundwater samples were collected post-IRM and observed significant increases in sulfate concentrations across OU-1 of the site. This will promote future anaerobic oxidation of remaining contamination in groundwater.

Concentrations of BTEX and PAHs at the Lot 1001 northern boundary persist only at depth and are associated with the deeper tar-related impacts encountered in the upgradient SB-9 area. Groundwater contamination likely extends off-site to the north, as indicated on Figure 6, but the well across Neptune Avenue, (MW-20), indicates that groundwater contamination does not appear to go beyond this street. Groundwater impacts do extend to the south but have not been detected outside of OU-2 (northeast corner of Lot 25).

Soil Vapor and Indoor Air: Concurrent sub-slab, indoor air and outdoor ambient air samples were collected within the former strip mall in 2010. Sub-slab air samples were collected from three of the tenant spaces with an indoor air sample collected from seven of the tenant spaces. MGP related contaminants were detected in the sub-slab vapor samples, but indoor air samples did not show concentrations of MGP-related contaminants above typical background levels. A non-MGP contaminant, tetrachloroethene (PCE), was detected above background indoor air concentrations in two of the strip mall stores, which may be attributed to a dry cleaner in the former plaza. PCE was detected at a maximum concentration of 606,000 micrograms per cubic meter (ug/m<sup>3</sup>) in sub-slab soil vapor sample SSSV-6. The maximum concentration of PCE detected in the indoor air of the shopping plaza was 18 ug/m<sup>3</sup>. The former shopping plaza was demolished and a new building was constructed which included a vapor barrier.

The NYSDEC completed indoor air sampling in the new on-site structure. PCE was not detected above typical background concentrations in any of the eight samples collected. The results indicate that the soil removal IRM and the building's vapor barrier are effective at addressing both MGP and non-MGP contaminants.

#### **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 who dig below the ground surface may come into contact with contaminants in subsurface soil and groundwater. 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 soil vapor (air spaces within the soil) may move into 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. Environmental sampling indicates soil vapor intrusion is not a current concern for on and off-site buildings. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for on-site buildings and for any future redevelopment.

#### **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.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

### **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: SUMMARY OF SELECTED REMEDY**

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation presented here, the Department has selected No Further Action as the remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5. The elements of the IRM already completed are discussed in Section 6.2 of this ROD, while the institutional and engineering controls are listed below:

### 1. Cover System

A site cover currently exists on the site, comprised of the new building slab and vapor barrier, paved surface parking areas, sidewalks or soil where the upper two feet of exposed surface soil

meets the applicable soil cleanup objectives (SCOs) for restricted residential use. The site cover will be maintained to allow for restricted residential use of the site. Any site redevelopment will include a site cover. 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).

## 2. 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 and commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;
- prohibits agriculture or vegetable gardens on the controlled property; and
- require compliance with the Department approved Site Management Plan.

## 3. Groundwater Monitoring

Groundwater monitoring will be required along the perimeter of the site to assess groundwater conditions near the groundwater treatment zone. Samples will be analyzed for all contaminants of concern and will include analysis for the bioremediation parameters dissolved oxygen and oxidation/reduction potential.

## 4. Site Management Plan

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

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

Institutional Controls: The Environmental Easement discussed in Paragraph 2 above.

Engineering Controls: The cover system discussed in Paragraph 1 above.

This Institutional and Engineering Control Plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
  - a provision for further investigation and remediation of Area 2, as described in Section 6.2, should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible. The nature and extent of contamination in areas where access was previously limited or unavailable will be immediately and thoroughly investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department determination of the need for a remedy, a Remedial Action Work Plan (RAWP) will be developed for the final remedy for the site, including removal and/or treatment of any source areas to the extent feasible. Citizen Participation Plan (CPP) activities will continue through this process. Any necessary remediation will be completed prior to, or in association with, redevelopment;
  - 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 buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
  - a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 1 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
  - provisions for the management and inspection of the identified engineering controls;
  - maintaining site access controls and Department notification; and
  - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
  - monitoring for vapor intrusion for any new buildings developed on the site as may be required by the Institutional and Engineering Control Plan discussed above; and
  - a schedule of monitoring and frequency of submittals to the Department.



## **Exhibit A**

### **Nature and Extent of Contamination**

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants of concern at the site are coal tar, PAHs BTEX and PCE compounds. For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

### **Waste/Source Areas**

As described in the RI report, waste/source materials were identified at the site and are impacting groundwater and soil.

Wastes are defined in 6 NYCRR Part 375-1.2 (aw) and include solid, industrial and/or hazardous wastes. Source Areas are defined in 6 NYCRR Part 375 (au). Source areas are areas of concern at a site where substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium.

The Waste and Source areas identified at the site were observed in areas corresponding with the footprint of the former MGP and in areas directly adjacent to those operations. Data collected during the remedial investigation indicates that the primary contaminants of concern include MGP related coal tar and its associated compounds (PAHs and BTEX). Soil saturated with coal tar was observed near and/or within historic structures including the former gas holders, the cistern and the tar tank. Figure 5 shows the limits of the area where source material was observed during the RI. As discussed in Section 6.2, IRMs were implemented in 2017 to address the source areas that were accessible within the top fifteen feet from the ground surface. Contamination was removed from several discrete areas where coal tar saturated soil was observed in the top 15 feet, and in-situ oxidation was utilized to treat a larger area of source material that remained. See Figures 3 and 4 for IRM areas.

### **Groundwater**

During the RI, groundwater samples were collected from 20 monitoring wells to determine the nature and extent of contamination in the groundwater. Five of the wells were temporary monitoring points and fifteen were permanent wells. The wells are all screened in the overburden water table, to depths ranging from 16 to 103 feet below ground surface (bgs). The wells were located in areas that allowed for an assessment of dissolved phase groundwater contamination. 17 of the wells are located onsite (3 within the footprint of former MGP) and 3 wells were installed off-site to assess contaminant migration. MGP related coal tar was observed in two of the onsite monitoring wells, MW-5 and MW-11.

Figure 6 depicts the well locations and concentrations of the BTEX groundwater plume. Contaminated groundwater has likely migrated off-site to the north under Neptune Avenue. However, contamination was not observed in the downgradient monitoring well, MW-20, located across Neptune Avenue.

As indicated in Table 1, the SCGs for the contaminants of concern were exceeded in groundwater across the site. The most impacted well was MW-5, which is located just downgradient of the former MGP gas holders. High levels of contaminants were also observed in well MW-11. Both wells are screened at depths from 30 to 40 feet deep.

**Table #1 – Groundwater**

Detected Constituents	Concentration Range Detected (ppb) <sup>a</sup>	SCG <sup>b</sup> (ppb)	Frequency Exceeding SCG
<b>VOCs</b>			
Benzene	ND – 6,800	1	11 of 20
Ethylbenzene	ND – 5,300	5	10 of 20
Toluene	ND – 10,000	5	8 of 20
Xylene	ND – 2,900	5	11 of 20
<b>SVOCs</b>			
Naphthalene	ND – 12,000	10	13 of 20
Acenaphthene	ND - 450	20	6 of 20
Benzo(a)anthracene	ND - 2.8	.002	4 of 20
Benzo(b)fluoranthene	ND – 1.6	.002	3 of 20
Phenanthrene	ND - 96	50	2 of 20
1,1'- Biphenyl	ND - 28	5	2 of 20

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

The in-situ oxidation IRM that was implemented will provide a stable source of sulfate over time to enhance the degradation of dissolved phase MGP contamination existing at the site. Groundwater samples taken from on-site wells following the IRM confirmed significant increases in sulfate concentrations across the site, which will promote future anaerobic degradation of remaining groundwater contamination. The IRM, combined with institutional controls, is expected to meet the site’s cleanup objectives for groundwater by reducing future contaminant concentrations and limiting the potential for exposure to contaminated groundwater. Groundwater monitoring will be performed to evaluate the effectiveness of this IRM over time.

## Soil

There were no surface soil samples collected during the RI since the entire site is either paved or covered by structures. During the RI, a total of 32 soil borings were advanced and 26 soil samples were collected to evaluate subsurface soil conditions. Borings were installed to depths ranging from 15 to 115 feet bgs, using both direct push and sonic drilling techniques. The cores were continuously sampled and logged for soil classification types.

Figure 7 shows the locations of the soil borings and summarizes the sampling results for SVOC exceedances at various depths across the site. The results of the sampling indicated that MGP related contamination (PAHs, BTEX) are present in subsurface soil. The contamination is present in the source areas (holders, cistern, tar tank) within the footprint of the former MGP and has migrated to adjacent areas. The highest concentrations were detected in soil boring SB-9 in the 72-73 ft depth interval. This boring is located north of the MGP under the parking lot area of the former shopping center. Significant contamination was also detected in soil boring SB-22 in the 33-34 ft interval. This boring is located just south of the former MGP operations on OU-2.

Table 2 summarizes the results for the subsurface soil samples that were collected during the RI. It should be noted that MGP contamination in soil is readily identifiable visually. Therefore, it was not necessary to submit samples for laboratory analysis in the instances where grossly contaminated soil was encountered. As such, Table 2 understates the extent of soil contamination at the site. MGP related coal tar was visually identified across the site at depths ranging from 5 to 73 feet bgs.

**Table #2 – Soil**

Detected Constituents	Concentration Range Detected (ppm) <sup>a</sup>	Unrestricted SCG <sup>b</sup> (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG <sup>c</sup> (ppm)	Frequency Exceeding Restricted SCG
<b>VOCs</b>					
Benzene	ND - 19	0.06	1 of 26	4.8	1 of 26
Ethylbenzene	ND - 320	1	3 of 26	41	3 of 26
Toluene	ND - 550	0.7	2 of 26	100	2 of 26
Xylene	ND - 740	0.26	3 of 26	100	3 of 26
<b>SVOCs</b>					
Naphthalene	ND - 94	12	2 of 26	100	2 of 26
Acenaphthylene	ND - 450	100	1 of 26	100	1 of 26
Acenaphthene	ND - 160	20	2 of 26	100	1 of 26
Fluorene	ND - 320	30	2 of 26	100	1 of 26
Phenathrene	ND - 1,600	100	2 of 26	100	2 of 26
Anthracene	ND - 320	100	1 of 26	100	1 of 26

Detected Constituents	Concentration Range Detected (ppm) <sup>a</sup>	Unrestricted SCG <sup>b</sup> (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG <sup>c</sup> (ppm)	Frequency Exceeding Restricted SCG
Fluoranthene	ND - 660	100	2 of 26	100	2 of 26
Pyrene	ND - 880	100	3 of 26	100	3 of 26
Benzo(a)anthracene	ND - 300	1	16 of 26	1	16 of 26
Chrysene	ND - 260	1	17 of 26	3.9	17 of 26
Benzo(b)fluoranthene	ND - 240	1	18 of 26	1	18 of 26
Benzo(k)fluoranthene	ND - 81	0.8	13 of 26	3.9	13 of 26
Benzo(a)pyrene	ND - 330	1	18 of 26	1	18 of 26
Indeno(1,2,3-cd)pyrene	ND - 200	0.5	21 of 26	0.5	21 of 26
Dibenz(a,h)anthracene	ND - 49	0.33	17 of 26	0.33	17 of 26
Benzo(g,h,i)perylene	ND - 240	100	1 of 26	100	1 of 26

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.

c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Restricted Residential Use.

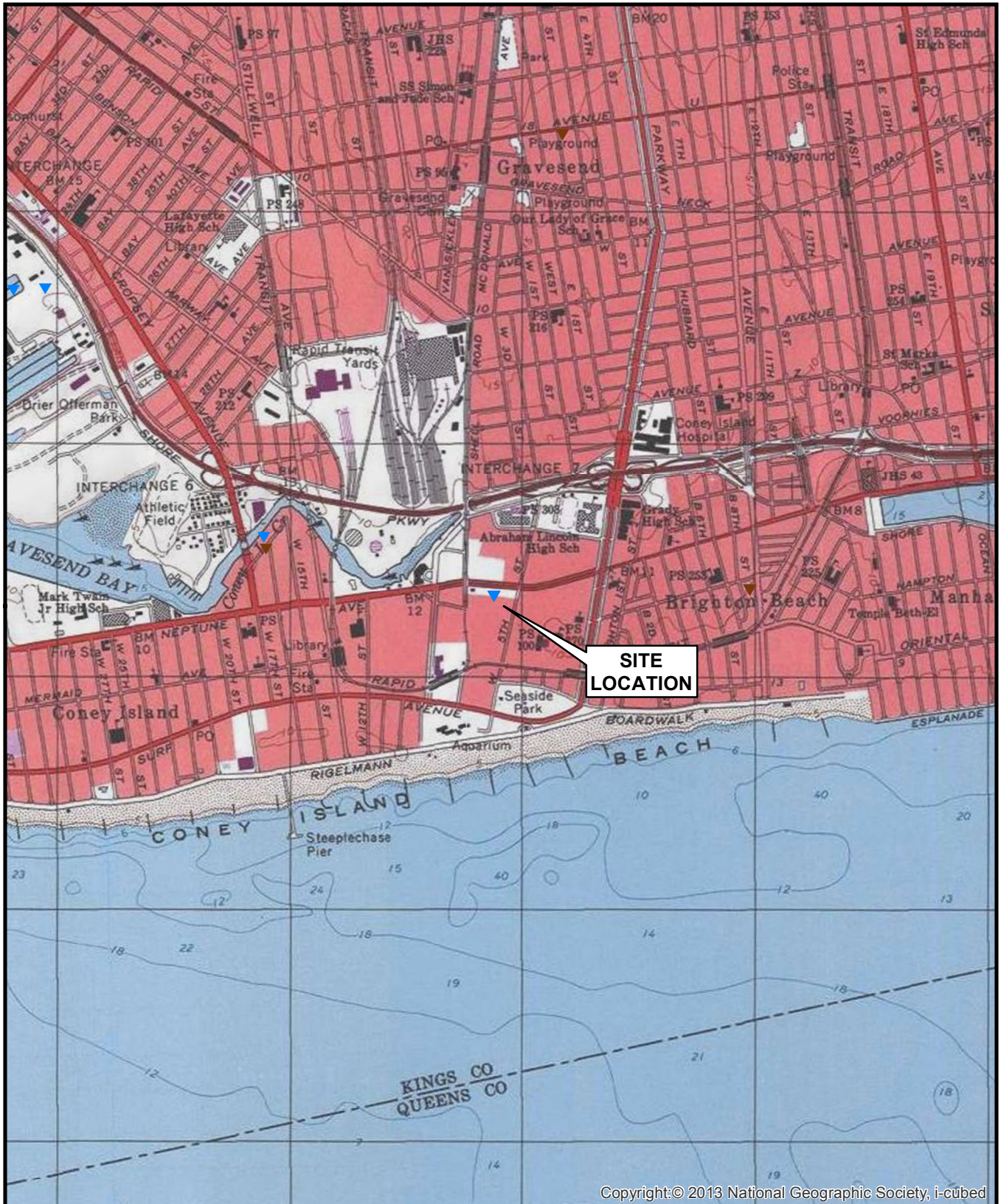
The excavation IRMs addressed MGP contaminant source areas that were identified within the top fifteen feet at the site. The IRM, combined with an engineering control in the form of an existing cover system, will limit human health exposures to contamination remaining at the site. Additionally, institutional controls (ICs) will be placed on the site in the form of an environmental easement which will place restrictions on the future site usage. Future site ground intrusive activities, including those below the demarcation barrier, will be managed by a Site Management Plan. ICs will also be documented in the SMP to address the potential for future excavation activities at the site.

## Soil Vapor

The soil vapor intrusion pathway was assessed due to the presence of contamination in the site's soil and groundwater. This was achieved by the collection of sub-slab and indoor air samples at seven tenant spaces in the former shopping plaza in 2010. The locations of the samples are shown on Figure 8. MGP related contaminants were generally detected at low level concentrations in the sub-slab soil vapor at the site with the highest concentration being benzene which was detected at 114 ug/m<sup>3</sup> in SSSV-1 collected from the former martial arts studio tenant space. MGP contaminants were not detected in the indoor air samples at concentrations above typical background levels. This shopping center has since been demolished. During the RI, four soil vapor points were also installed and sampled from areas across the site. Toluene, a potential MGP related contaminant, was detected in soil vapor points SV-1 and SV-2. There were no MGP related contaminants present in the other two samples.

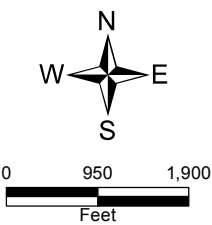
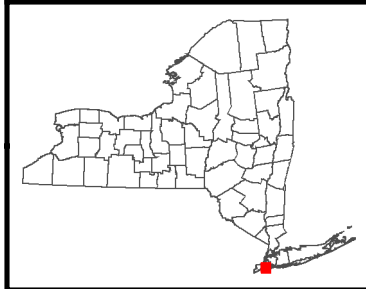
Non-MGP contaminants were detected in the soil vapor samples collected at the site. The contaminant, PCE, was detected at a maximum concentration of 606,000 micrograms per cubic meter (ug/m<sup>3</sup>) in sub-slab soil vapor sample SSSV-6 collected from the former pharmacy in the strip mall. The maximum concentration of PCE detected in the indoor air of the shopping plaza was 18 ug/m<sup>3</sup>. The building where these samples were collected has since been demolished. The property owner has developed the site for commercial and restricted residential use and has installed a vapor barrier in the new building. The NYSDEC recently completed indoor air sampling in the new building and PCE was not detected above typical background concentrations in any of the eight samples collected. The results indicate that the soil removal IRM and the building's vapor barrier are effective at addressing both MGP and non-MGP contaminants.

No off-site soil vapor intrusion sampling was determined necessary.



**SITE LOCATION**

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**Figure 1**  
**Site Location Map**  
 Former Dangman Park MGP Site  
 Brooklyn  
 Site No. 224047



# Dangman Park MGP Site (224047) 486 Neptune Avenue, Brooklyn, NY Figure 2 - Site Boundary



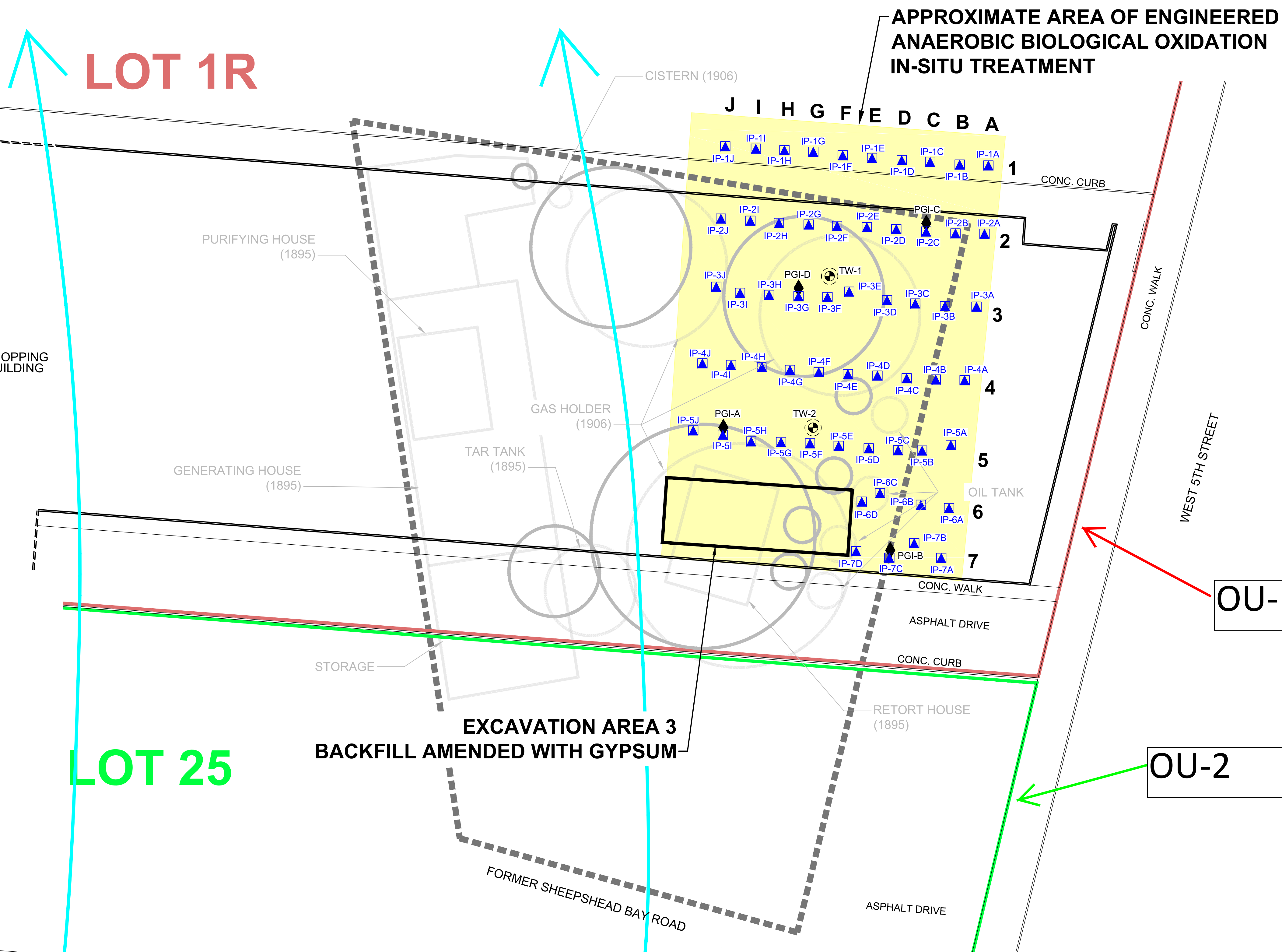
Department of  
Environmental  
Conservation

CITY/SYRACUSE-NY DIV/GRUP/PERV DBA/SANCHEZ LDALS PIC/OPM PM/REED TM/OPM LYN/OHION/OFF-REF-  
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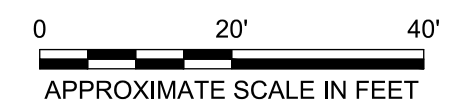
**NOTES:**

1. TEMPORARY MONITORING WELL, GYPSUM SLURRY INJECTION, AND POST-GYPSUM INJECTION SOIL BORING LOCATIONS SURVEYED RELATIVE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. LOCATIONS OF FORMER MGP FEATURES ARE APPROXIMATE.
3. BASE MAP BY DONALD G. DEKENIPP L.S., P.C., PROFESSIONAL LAND SURVEYOR.
4. IN-SITU TREATMENT LOCATIONS ARE THE INJECTION LOCATIONS (IP-1A THROUGH IP-7D) WHERE GYPSUM SLURRY WAS INJECTED AND EXCAVATION AREA 3 WHERE THE BACKFILL WAS AMENDED WITH GYPSUM. ALL WORK WAS CONDUCTED IN 2017.



**LEGEND:**

- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 1R
- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 25
- - - APPROXIMATE FORMER MGP SITE BOUNDARY
- FORMER MGP FEATURE (1895 AND/OR 1906 SANBORN FIRE INSURANCE MAPS)
- FORMER MGP FEATURE (1895 AND/OR 1906 SANBORN FIRE INSURANCE MAPS) ADJUSTED BASED ON FIELD OBSERVATIONS OF POTENTIAL GAS HOLDER WALL DURING THE SUPPLEMENTAL REMEDIAL INVESTIGATION
- ⊙ TW-1 TEMPORARY MONITORING WELL LOCATION
- ◆ PGI-A POST-GYPSUM INJECTION SOIL BORING LOCATION
- ▲ IP-1A GYPSUM SLURRY INJECTION LOCATION
- ↗ DIRECTION OF HORIZONTAL COMPONENT OF GROUNDWATER FLOW



NATIONAL GRID  
 FORMER DANGMAN PARK MGP SITE  
 BROOKLYN, NEW YORK

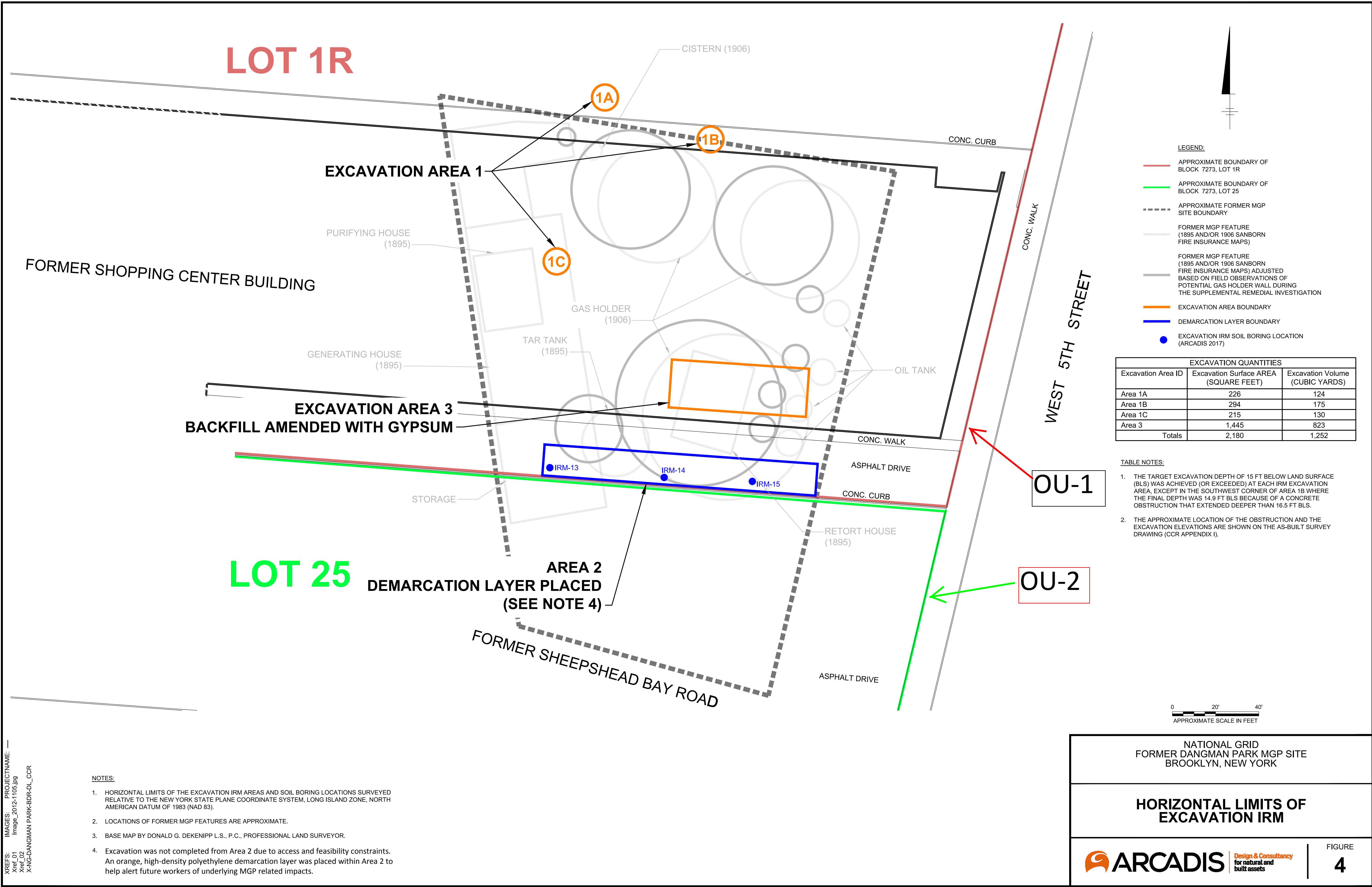
**IN-SITU TREATMENT LOCATIONS**

**ARCADIS** Design & Consultancy  
 for natural and built assets

FIGURE  
**3**



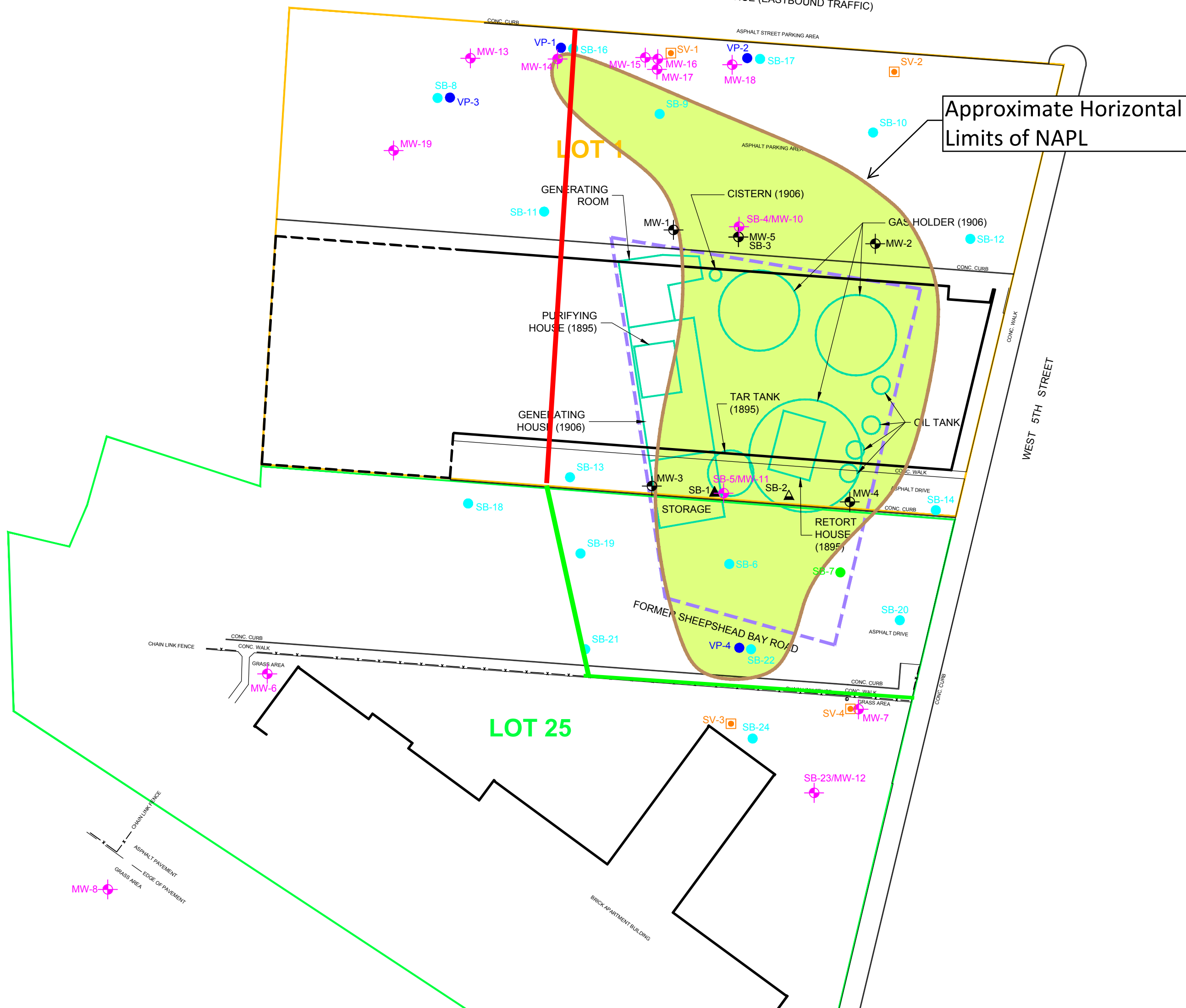
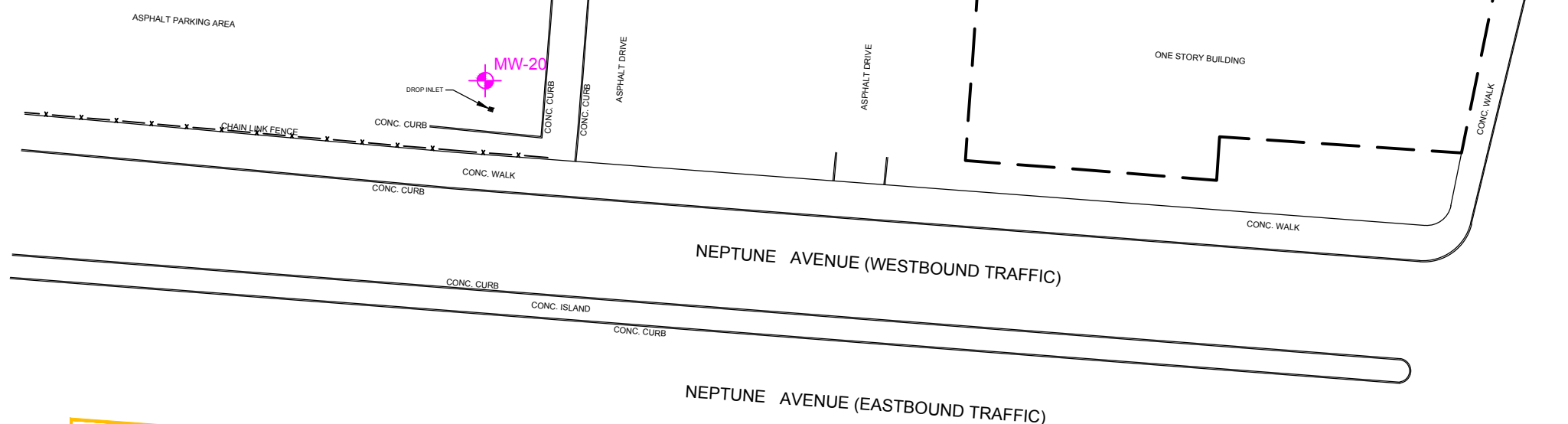
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## BLOCK 7250 LOT 1R



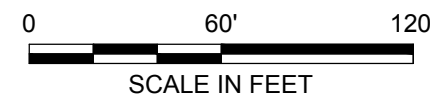
Approximate Horizontal Limits of NAPL

**LEGEND:**

- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 1
- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 25
- - - APPROXIMATE FORMER MGP SITE BOUNDARY
- FORMER MGP FEATURE (1895 AND/OR 1906 SANBORN FIRE INSURANCE MAPS)
- SB-1 ▲ SITE CHARACTERIZATION SOIL BORING LOCATION (ARCADIS, 2009)
- SB-2 ▲ SITE CHARACTERIZATION SOIL BORING/GEOPROBE GROUNDWATER SAMPLING LOCATION (ARCADIS, 2009)
- MW-1 ● SITE CHARACTERIZATION MONITORING WELL LOCATION (ARCADIS, 2009)
- SB-7 ● REMEDIAL INVESTIGATION NAPL DELINEATION SOIL BORING/VERTICAL AQUIFER PROFILE TEMPORARY MONITORING WELL LOCATION (ARCADIS, 2011)
- SB-8 ● REMEDIAL INVESTIGATION NAPL DELINEATION SOIL BORING LOCATION (ARCADIS, 2011 AND 2012)
- MW-6 ● REMEDIAL INVESTIGATION MONITORING WELL LOCATION (ARCADIS, 2011, 2012, AND 2013)
- VP-1 ● REMEDIAL INVESTIGATION VERTICAL AQUIFER PROFILE TEMPORARY MONITORING WELL LOCATION (ARCADIS, 2012)
- SV-1 □ REMEDIAL INVESTIGATION SOIL VAPOR POINT LOCATION (ARCADIS, 2012)

**NOTES:**

1. MONITORING WELL, SOIL BORING, AND SOIL VAPOR POINT LOCATIONS SURVEYED RELATIVE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. LOCATIONS OF MGP FEATURES ARE APPROXIMATE.
3. BASE MAP BY DONALD G. DEKENIPP L.S., P.C., PROFESSIONAL LAND SURVEYOR.
4. THE EXTENT OF NAPL IS BASED ON THE OBSERVATION OF TAR AND/OR BLEBS IN THE SOIL BORINGS. STAINED SOIL OR A SHEEN WERE NOT INCLUDED IN THE MAPPING OF THE EXTENT OF NAPL.

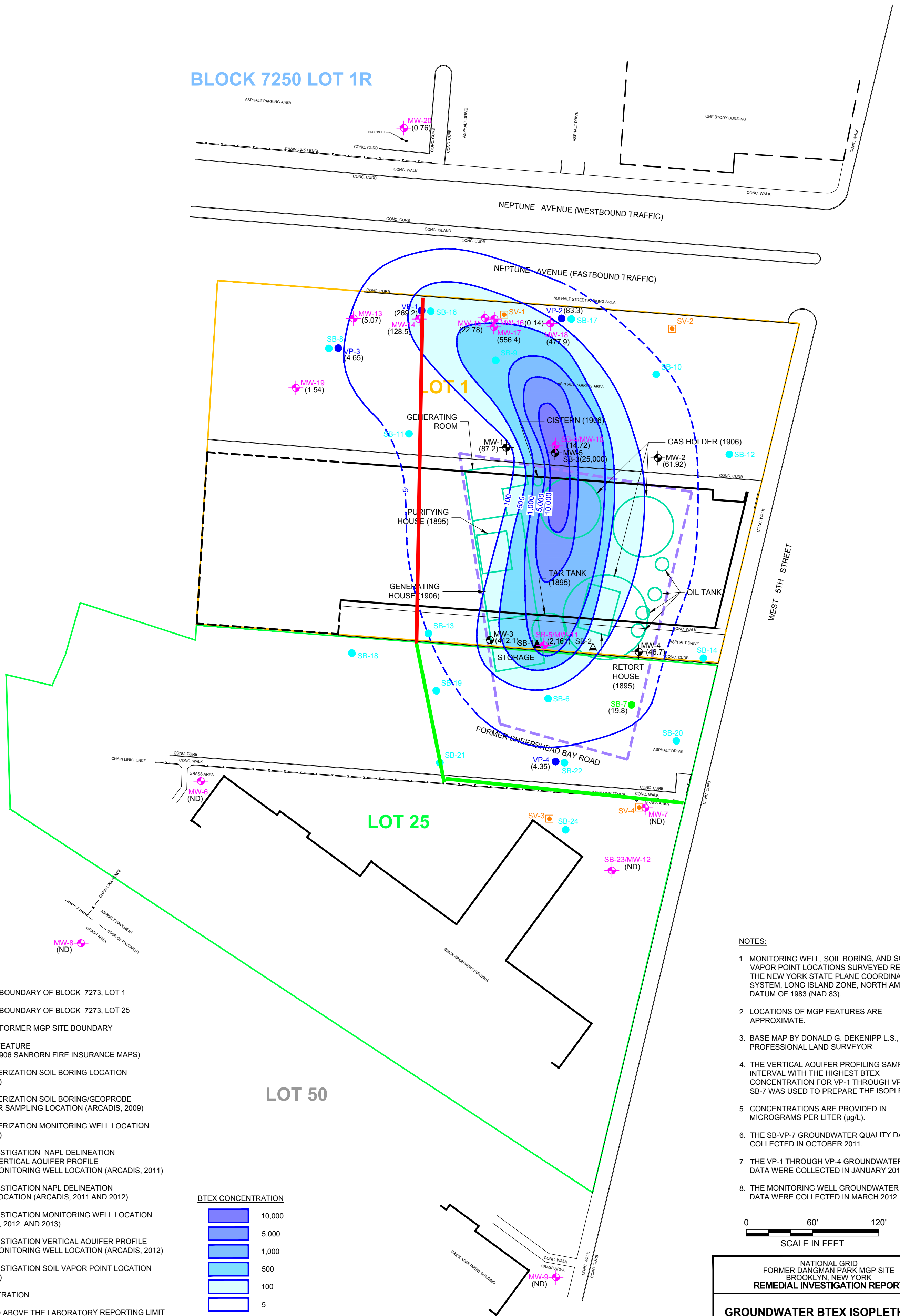


NATIONAL GRID FORMER DANGMAN PARK MGP SITE BROOKLYN, NEW YORK <b>REMEDIAL INVESTIGATION REPORT</b>	
<b>EXTENT OF NAPL</b>	
	FIGURE <b>5</b>

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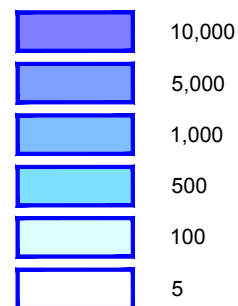
# BLOCK 7250 LOT 1R



**LEGEND:**

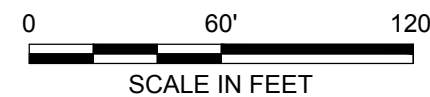
- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 1
- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 25
- - - APPROXIMATE FORMER MGP SITE BOUNDARY
- FORMER MGP FEATURE (1895 AND/OR 1906 SANBORN FIRE INSURANCE MAPS)
- SB-1 ▲ SITE CHARACTERIZATION SOIL BORING LOCATION (ARCADIS, 2009)
- SB-2 ▲ SITE CHARACTERIZATION SOIL BORING/GEOPROBE GROUNDWATER SAMPLING LOCATION (ARCADIS, 2009)
- MW-1 ● SITE CHARACTERIZATION MONITORING WELL LOCATION (ARCADIS, 2009)
- SB-7 ● REMEDIAL INVESTIGATION NAPL DELINEATION SOIL BORING/VERTICAL AQUIFER PROFILE TEMPORARY MONITORING WELL LOCATION (ARCADIS, 2011)
- SB-8 ● REMEDIAL INVESTIGATION NAPL DELINEATION SOIL BORING LOCATION (ARCADIS, 2011 AND 2012)
- MW-6 ● REMEDIAL INVESTIGATION MONITORING WELL LOCATION (ARCADIS, 2011, 2012, AND 2013)
- VP-1 ● REMEDIAL INVESTIGATION VERTICAL AQUIFER PROFILE TEMPORARY MONITORING WELL LOCATION (ARCADIS, 2012)
- SV-1 □ REMEDIAL INVESTIGATION SOIL VAPOR POINT LOCATION (ARCADIS, 2012)
- (4.35) BTEX CONCENTRATION
- (ND) NOT DETECTED ABOVE THE LABORATORY REPORTING LIMIT

**BTEX CONCENTRATION**



**NOTES:**

1. MONITORING WELL, SOIL BORING, AND SOIL VAPOR POINT LOCATIONS SURVEYED RELATIVE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. LOCATIONS OF MGP FEATURES ARE APPROXIMATE.
3. BASE MAP BY DONALD G. DEKENIPP L.S., P.C., PROFESSIONAL LAND SURVEYOR.
4. THE VERTICAL AQUIFER PROFILING SAMPLE INTERVAL WITH THE HIGHEST BTEX CONCENTRATION FOR VP-1 THROUGH VP-4 AND SB-7 WAS USED TO PREPARE THE ISOPLETHS.
5. CONCENTRATIONS ARE PROVIDED IN MICROGRAMS PER LITER (µg/L).
6. THE SB-VP-7 GROUNDWATER QUALITY DATA WERE COLLECTED IN OCTOBER 2011.
7. THE VP-1 THROUGH VP-4 GROUNDWATER QUALITY DATA WERE COLLECTED IN JANUARY 2012.
8. THE MONITORING WELL GROUNDWATER QUALITY DATA WERE COLLECTED IN MARCH 2012.



NATIONAL GRID  
 FORMER DANGMAN PARK MGP SITE  
 BROOKLYN, NEW YORK  
**REMEDIAL INVESTIGATION REPORT**

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**GROUNDWATER BTEX ISOPLETH MAP**

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**ARCADIS**

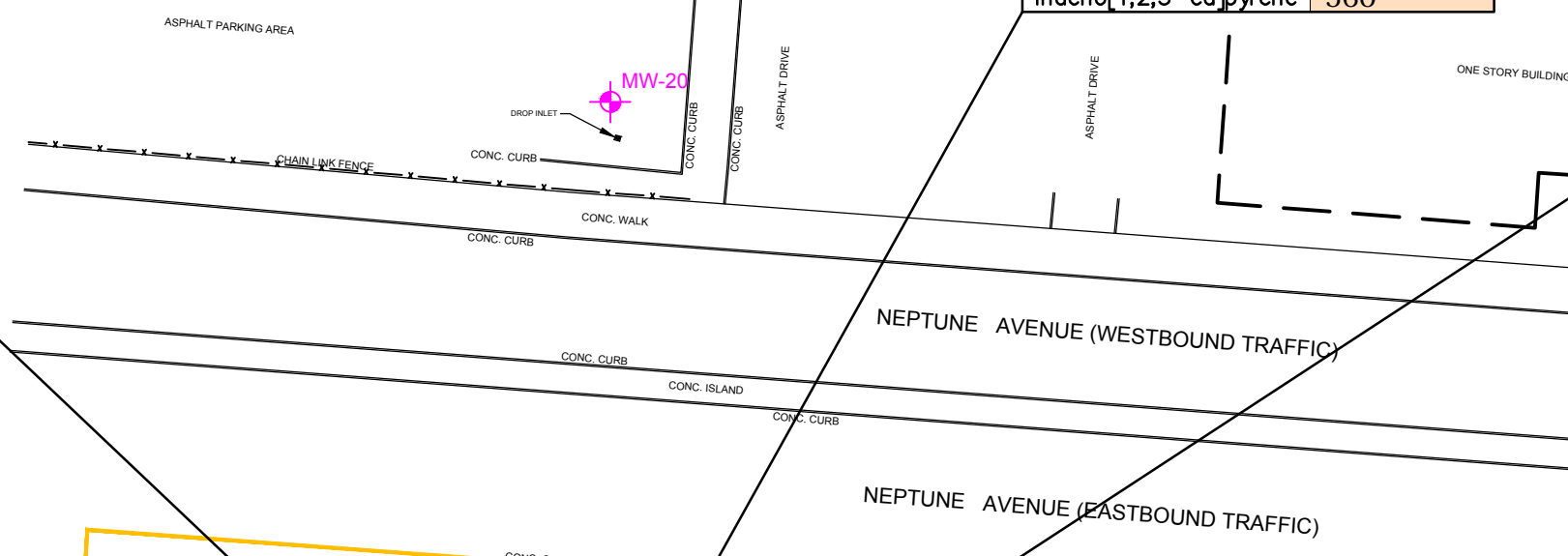
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SB-8	
Sample ID	SB-8 (2-3')
Sample Date	12/8/2011
Sample Depth (ft)	2 - 3
Compound	
Benzo[a]anthracene	1,600
Chrysene	1,800
Benzo[b]fluoranthene	2,200
Benzo[k]fluoranthene	900
Benzo[a]pyrene	2,000
Indeno[1,2,3-cd]pyrene	1,400
Dibenz(a,h)anthracene	420

SB-16	
Sample ID	SB-16 (2-3')
Sample Date	12/14/2011
Sample Depth (ft)	2 - 3
Compound	
Benzo[b]fluoranthene	1,100
Indeno[1,2,3-cd]pyrene	560

MW-17	
Sample ID	MW-17 (7-9')
Sample Date	2/15/2012
Sample Depth (ft)	7 - 9
Compound	
Benzo[a]anthracene	9,800
Chrysene	9,600
Benzo[b]fluoranthene	5,800
Benzo[k]fluoranthene	2,300
Benzo[a]pyrene	7,800
Indeno[1,2,3-cd]pyrene	3,600
Dibenz(a,h)anthracene	720

## BLOCK 7250 LOT 1R



MW-19		
Sample ID	MW-19 (2-3')	MW-19 (5-7')
Sample Date	2/20/2012	2/20/2012
Sample Depth (ft)	2 - 3	5 - 7
Compound		
Benzo[a]anthracene	2,200	2,500
Chrysene	2,500	2,700
Benzo[b]fluoranthene	2,300	2,400
Benzo[k]fluoranthene	900	960
Benzo[a]pyrene	2,100	2,900
Indeno[1,2,3-cd]pyrene	1,600	2,200
Dibenz(a,h)anthracene	400	520

SB-17	
Sample ID	SB-17 (2-3')
Sample Date	12/9/2011
Sample Depth (ft)	2 - 3
Compound	
Benzo[a]anthracene	4,900
Chrysene	5,100
Benzo[b]fluoranthene	4,000
Benzo[k]fluoranthene	1,900
Benzo[a]pyrene	3,800
Indeno[1,2,3-cd]pyrene	2,800
Dibenz(a,h)anthracene	750

SB-11		
Sample ID	SB-11 (2-3')	SB-11 (6-8')
Sample Date	12/6/2011	12/6/2011
Sample Depth (ft)	2 - 3	6 - 8
Compound		
Benzo[a]anthracene	7,600	--
Chrysene	8,400	--
Benzo[b]fluoranthene	10,000	--
Benzo[k]fluoranthene	4,800	--
Benzo[a]pyrene	8,800	--
Indeno[1,2,3-cd]pyrene	6,300	8,200
Dibenz(a,h)anthracene	1,700	620

SB-10	
Sample ID	SB-10 (2-3')
Sample Date	12/12/2011
Sample Depth (ft)	2 - 3
Compound	
Indeno[1,2,3-cd]pyrene	650 J

SB-12	
Sample ID	SB-12 (2-3')
Sample Date	12/13/2011
Sample Depth (ft)	2 - 3
Compound	
Benzo[a]anthracene	1,900
Chrysene	2,600
Benzo[b]fluoranthene	1,800
Benzo[a]pyrene	1,800 J
Indeno[1,2,3-cd]pyrene	1,300

SB-9			
Sample ID	SB-9 (2-3')	SB-9 (6-8')	SB-9 (72-73.5')
Sample Date	12/7/2011	12/7/2011	12/8/2011
Sample Depth (ft)	2 - 3	6 - 8	72 - 73.5
Compound			
Naphthalene	--	--	71,000 J
Acenaphthylene	--	--	450,000 J
Acenaphthene	--	--	45,000 J
Fluorene	--	--	320,000 J
Phenanthrene	--	--	1,600,000 J
Anthracene	--	--	320,000 J
Fluoranthene	--	--	660,000 J
Pyrene	--	--	880,000 J
Benzo[a]anthracene	11,000	--	300,000 J
Chrysene	12,000	2,000	260,000 J
Benzo[b]fluoranthene	15,000	1,600	240,000 J
Benzo[k]fluoranthene	7,500	--	81,000 J
Benzo[a]pyrene	13,000	6,300	330,000 J
Indeno[1,2,3-cd]pyrene	10,000	6,300	200,000 J
Dibenz(a,h)anthracene	2,800	940	49,000 J
Benzo[g,h,i]perylene	--	--	240,000 J

SB-7	
Sample ID	SB-7 (6-8')
Sample Date	10/18/2011
Sample Depth (ft)	6 - 8
Compound	
Benzo[a]anthracene	1,500
Chrysene	2,200
Benzo[b]fluoranthene	1,900
Benzo[a]pyrene	3,400
Indeno[1,2,3-cd]pyrene	3,700
Dibenz(a,h)anthracene	480

SB-13			
Sample ID	SB-13 (2-3')	Dup103111	SB-13 (6-8')
Sample Date	10/31/2011	10/31/2011	10/31/2011
Sample Depth (ft)	2 - 3	2 - 3	6 - 8
Compound			
Benzo[a]anthracene	5,500	5,500	--
Chrysene	6,600	5,900	--
Benzo[b]fluoranthene	6,600	6,600	--
Benzo[k]fluoranthene	2,600	2,600	--
Benzo[a]pyrene	6,300	6,200	1,800
Indeno[1,2,3-cd]pyrene	5,500	5,400	2,100
Dibenz(a,h)anthracene	1,200	1,200	--

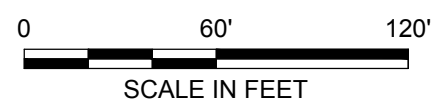
SB-6		
Sample ID	SB-6 (2-3')	SB-6 (43-45')
Sample Date	10/17/2011	10/17/2011
Sample Depth (ft)	2 - 3	43 - 45
Compound		
Pyrene	140,000 J	--
Benzo[a]anthracene	61,000 J	6,200 J
Chrysene	75,000 J	5,900 J
Benzo[b]fluoranthene	46,000 J	4,000 J
Benzo[k]fluoranthene	20,000 J	1,700 J
Benzo[a]pyrene	31,000 J	5,600 J
Indeno[1,2,3-cd]pyrene	35,000 J	2,200 J
Dibenz(a,h)anthracene	9,600 J	490 J

SB-19	
Sample ID	SB-19 (2-3')
Sample Date	12/15/2011
Sample Depth (ft)	2 - 3
Compound	
Benzo[a]anthracene	3,500
Chrysene	4,200
Benzo[b]fluoranthene	4,100
Benzo[k]fluoranthene	1,500
Benzo[a]pyrene	3,800
Indeno[1,2,3-cd]pyrene	2,500
Dibenz(a,h)anthracene	640

SB-22	
Sample ID	SB-22 (33-34')
Sample Date	1/19/2012
Sample Depth (ft)	33 - 34
Compound	
Naphthalene	94,000 J
Acenaphthene	160,000 J
Fluorene	69,000 J
Phenanthrene	330,000 J
Fluoranthene	120,000 J
Pyrene	190,000 J
Benzo[a]anthracene	59,000 J
Chrysene	47,000 J
Benzo[b]fluoranthene	33,000 J
Benzo[k]fluoranthene	13,000 J
Benzo[a]pyrene	44,000 J
Indeno[1,2,3-cd]pyrene	21,000 J
Dibenz(a,h)anthracene	3,300 J

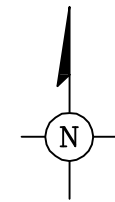
- LEGEND:**
- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 1
  - APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 25
  - APPROXIMATE FORMER MGP SITE BOUNDARY
  - FORMER MGP FEATURE (1895 AND/OR 1906 SANBORN FIRE INSURANCE MAPS)
  - SB-1 ▲ SITE CHARACTERIZATION SOIL BORING LOCATION (ARCADIS, 2009)
  - SB-2 ▲ SITE CHARACTERIZATION SOIL BORING/GEOPROBE GROUNDWATER SAMPLING LOCATION (ARCADIS, 2009)
  - MW-1 ● SITE CHARACTERIZATION MONITORING WELL LOCATION (ARCADIS, 2009)
  - SB-7 ● REMEDIAL INVESTIGATION NAPL DELINEATION SOIL BORING/VERTICAL AQUIFER PROFILE TEMPORARY MONITORING WELL LOCATION (ARCADIS, 2011)
  - SB-8 ● REMEDIAL INVESTIGATION NAPL DELINEATION SOIL BORING LOCATION (ARCADIS, 2011 AND 2012)
  - MW-6 ● REMEDIAL INVESTIGATION MONITORING WELL LOCATION (ARCADIS, 2011, 2012, AND 2013)
  - VP-1 ● REMEDIAL INVESTIGATION VERTICAL AQUIFER PROFILE TEMPORARY MONITORING WELL LOCATION (ARCADIS, 2012)
  - SV-1 ● REMEDIAL INVESTIGATION SOIL VAPOR POINT LOCATION (ARCADIS, 2012)
  - BOLD** COMPOUND CONCENTRATION EXCEEDS UNRESTRICTED USE SCO
  - NO EXCEEDANCE
  - SCO SOIL CLEANUP OBJECTIVE
  - J ESTIMATED VALUE

- NOTES:**
- MONITORING WELL, SOIL BORING, AND SOIL VAPOR POINT LOCATIONS SURVEYED RELATIVE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
  - LOCATIONS OF MGP FEATURES ARE APPROXIMATE.
  - BASE MAP BY DONALD G. DEKENIPP L.S., P.C., PROFESSIONAL LAND SURVEYOR.
  - CONCENTRATIONS ARE PROVIDED IN MICROGRAMS PER KILOGRAM (µg/kg).



NATIONAL GRID  
 FORMER DANGMAN PARK MGP SITE  
 BROOKLYN, NEW YORK  
**REMEDIAL INVESTIGATION REPORT**  
**SEMI-VOLATILE ORGANIC COMPOUNDS**  
**IN SOIL EXCEEDING UNRESTRICTED USE**  
**SCOs**

TENANT SPACE DESIGNATION	TENANT SPACE IDENTIFICATION
①	APPLE BANK
②	RADIO SHACK
③	SILENT THUNDER MARTIAL ARTS
④	WEST 5TH MEDICAL SUPPLY
⑤	EASTERN CHINESE RESTAURANT
⑥	KURT CLEANERS
⑦	CAPITAL ONE BANK
⑧	CVS PHARMACY
⑨	TRUMP HALLMARK



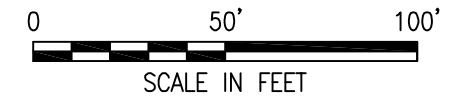
- LEGEND:**
- APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 1
  - APPROXIMATE BOUNDARY OF BLOCK 7273, LOT 25
  - - - APPROXIMATE FORMER MGP BOUNDARY
  - FORMER MGP FEATURE (1895 AND/OR 1906 SANBORN FIRE INSURANCE MAPS)
  - TENANT SPACE BOUNDARY
  - ① TENANT SPACE DESIGNATION
  - SB-1 ▲ SOIL BORING LOCATION
  - SB-2 ▲ SOIL BORING/GEOPROBE GROUNDWATER SAMPLING LOCATION
  - MW-1 ● MONITORING WELL LOCATION
  - SSSV-1 ● SUB-SLAB SOIL VAPOR SAMPLE LOCATION
  - IA-1 ☒ INDOOR AIR QUALITY SAMPLE LOCATION
  - AA-1 ☒ AMBIENT AIR QUALITY SAMPLE LOCATION

606,000 ug/m<sup>3</sup> (PCE)  
28,000 ug/m<sup>3</sup> (TCE)

114 ug/m<sup>3</sup> (Benzene)

OU-1

OU-2



- NOTES:**
- MONITORING WELL AND SOIL BORING LOCATIONS SURVEYED RELATIVE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
  - LOCATIONS OF MGP FEATURES ARE APPROXIMATE.
  - TENANT SPACE BOUNDARIES ARE APPROXIMATE.
  - VAPOR INTRUSION INVESTIGATION SAMPLE LOCATIONS ARE APPROXIMATE.

NATIONAL GRID USA  
FORMER DANGMAN PARK MGP SITE  
BROOKLYN, NEW YORK

**SITE CHARACTERIZATION DATA SUMMARY ADDENDUM**

**VAPOR INTRUSION INVESTIGATION  
SAMPLE LOCATIONS**




FIGURE 8

CITY: (Reqd) DIV: (Reqd) DB: (Reqd) LD: (Opt) PIC: (Opt) PM: (Reqd) TM: (Opt) LYR: (Opt) ON: OFF: REF: 4/27/2010 4:18 PM BY: SANCHEZ, ADRIAN  
 G:\ENV\CAD\Melville-NY\ACT\B030367\04\0000\0000\03\01 Addendum.dwg LAYOUT: 1/SAVED: 4/13/2010 11:33 AM ACADYVER: 17.1S (LMS TECH) PAGES SETUP: ----POLYSYLLABLES: ARCADIS\_MELVILLE.CTB PLOTTED: 4/27/2010 4:18 PM BY: SANCHEZ, ADRIAN  
 XREFS: Xref\_02 Xref\_01

# APPENDIX A

## Responsiveness Summary RESPONSIVENESS SUMMARY

### K – Dangman Park MGP Manufactured Gas Plant Project Brooklyn, Kings County, New York Site No. 224047

The Proposed Remedial Action Plan (PRAP) for the Dangman Park MGP site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 26, 2020. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater at the Dangman Park MGP site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A virtual public meeting was held on October 14<sup>th</sup>, 2021, which included a presentation of the remedial investigation and interim remedial measures for the Dangman Park MGP site as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on October 30<sup>th</sup>, 2021.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

Questions received at the October 14<sup>th</sup>, 2021 virtual public meeting:

**COMMENT 1:** There is some additional development planned near the site. Does the state have any plans to monitor this future work?

**RESPONSE 1:** It is the Department's understanding that the planned development is off-site to the west and outside the limits of the site boundaries, specifically OU-1. This area was investigated during the RI and the observed MGP impacts did not extend very far outside the limits of OU-1. In addition, the impacts in this area were present at a depth of approximately 70 feet. Therefore, site related impacts would not be expected to be a concern during development. Any future ground intrusive activity that occurs within the boundary of OU-1, will need to be completed in accordance with the Site Management Plan (SMP), and the DEC would be involved in the review of the plans and evaluation of any data required to be obtained during the intrusive activity.

**COMMENT 2:** Is there a plume map for the current groundwater concentrations? How will that be monitored?

**RESPONSE 2:** An updated groundwater plume map is not available. Field measurements were taken, following the in-situ groundwater IRM, to ensure adequate placement of gypsum in the subsurface. The on-site redevelopment encompasses the majority of OU-1 and required decommissioning of the site's existing groundwater wells. Therefore, the scope of any future groundwater monitoring well network on OU-1 would be limited. However, plans are being made to install groundwater monitoring wells around the perimeter of the site to assess the stability of the groundwater plume. Since groundwater impacts were predominantly limited to on-site groundwater, the environmental easement and site management plan will be sufficient to address groundwater impacts.

**COMMENT 3:** What is the plan for OU2?

**RESPONSE 3:** Additional investigation activities are needed on OU-2. Access negotiations are ongoing between National Grid and the property owner for completion of this work. OU-2 will be the subject of a future Record of Decision.

**COMMENT 4:** Will there be another meeting?

**RESPONSE 4:** The Department has determined that another public meeting, either virtual or in person, is not needed for OU-1. Other than those questions collected during the public meeting, there have not been any comments received from the public (other than from involved property owners and National Grid) during the comment period. A recording of the virtual meeting is available at <https://www.dec.ny.gov/data/DecDocs/224047>. In addition, the Department's project manager is available to answer any questions related to the site.

**COMMENT 5:** Have there been any health surveys in the retirement community to the north of the site?

**RESPONSE 5:** No. There were no potential exposure concerns identified for this off-site community. In fact, Section 8.0 of the site's DEC approved July 2014 Remedial Investigation Report concluded that no complete exposure pathways existed for on-site related contamination. The IRMs that have been implemented provide additional long-term protection by promoting the continued degradation of the site's remaining contamination.

Data indicates that site-related contamination has migrated onto OU-2 to the south. As noted in response 3, additional investigation activities are needed on OU-2. Access negotiations are ongoing between National Grid and the property owner for completion of this work. OU-2 will be the subject of a future Record of Decision.

**COMMENT 6:** The western part of the site had a laundry business and a vehicle repair facility. Were those areas investigated?

**RESPONSE 6:** In general, the Responsible Party (RP) is only responsible for investigating the impacts associated with the former MGP site. Some chlorinated solvents were detected during the Remedial Investigation's soil vapor intrusion evaluation which may be related to the past laundry

or vehicle repair business operations. Indoor air sampling did not identify any impacts above indoor air guidelines during the investigation. However, a soil vapor barrier was installed beneath the site's newly constructed building as part of local building code requirements. Recent indoor air sampling completed by NYSDEC has confirmed that on-site indoor air quality is not impacted by chlorinated solvents.

Letters received during the comment period:

Malvina Lin P.C. on behalf of Trump Village West submitted a letter (dated October 29<sup>th</sup>, 2021) which included the following comments:

**COMMENT 7:**

Dear Messrs. Miller and Lawrence:

I am an attorney representing Trump Village Section 4, Inc. ("Trump Village West"). On their behalf I submit this comment letter objecting to the close out of the Intermediate Remedial Measures and recommendation of "no further action" at the OU-1 site located north of the Trump Village West property. As you are aware, Trump Village West is a cooperative complex located adjacent to the former Dangman Park MGP and it owns the property that includes the parking lot upon which a small portion of the Dangman Park MGP was purportedly located. The basis of Trump Village West's objections are both in the nature of procedural objections as to the inadequate public meeting and dissemination of pertinent information as well as substantive objections based on the information available to date.

The lack of adequate notice of the Virtual Public Meeting and the Manner in Which the Virtual Public Meeting was held requires an additional meeting as well as an extension of the Public Comment Period.

Trump Village West represents the shareholders, occupants, managers, employees, and visitors of 1,144 residential apartment units. The complex is known as a "NORC" which is a naturally occurring retirement community and as such a large portion of the population tends to be older. As the immediate neighbor of 486-532 Neptune Avenue, Brooklyn, New York Trump Village West and all that are represented are constituents with a strong interest and concern regarding any contamination and remedial measures undertaken at the adjoining property.

Although the current General Manager, Igor Oberman, received an email with a flyer and other information regarding the Virtual Public Meeting from April Dubison of National Grid, almost none of the constituent residents were able to receive advance notice in time for the meeting. Ms. Dubison's email to Mr. Oberman was on October 8, 2021, just six days prior to the proposed meeting. On that date she indicated that a mailing was going to be disseminated to all the residents of Trump Village West. On October 12, 2021, just two days before the scheduled meeting, Ms. Dubison indicated that the mailing was delayed and indeed to the best of management's knowledge the mailing with the meeting information did not arrive until long after the meeting was held.

The foregoing procedure was certainly not reasonably calculated to provide members of a constituency who are affected interested parties an opportunity to get information and comment



upon the IRM and proposed "no further action." Notice of a public meeting should be done proactively to notify the public. Mention was made that notice was given by email to individuals who previously registered with NYSDEC. Individuals change email addresses so even those who were previously registered almost two years ago from the cancelled public meeting may have not received notice. The Virtual Public Meeting is also flawed when considering the age and experience of the Trump Village West population with virtual platforms. The platform selected, Cisco Webex, is not one of the more popular and commonly used such as Zoom, Google Meet, or Skype which further impedes access.

Having experienced the Virtual Public Meeting I observed that each participant was required to provide their information before being granted access to the meeting. This is in stark contrast to a true public meeting where any interested party can attend without the requirement of providing name and contact information. I would also note that all participants were blocked from seeing other participants which is the opposite of a public forum. This procedure may have served as a deterrent to those who were aware of the meeting.

In addition, it seemed that even experienced virtual platform users may have encountered technical difficulties as I myself experienced. After initially working the Webex platform stopped broadcasting properly and by the time it was working again I had missed a large portion of the presentation. This was despite doing everything right and having used the same equipment and multiple virtual platforms many times previously throughout the pandemic. Another user was unable to submit their request because she could not locate the submit button on the page. The ability to use a phone and call into the meeting with multiple presenters is not a viable option. The ability to not see who is speaking is confusing and discourages any meaningful comprehension of information.

Therefore, it is fair to imagine that less experienced or technologically experienced individuals, such as the retirees at Trump Village West, would be deterred or prevented from participating. This is compounded by the fact that Trump Village West shareholders received no advance notice of the Virtual Public Meeting. Although I was able to request and received after a second effort a copy of the recorded meeting there is nothing in the late received notice that even provides this option to members of the public. Moreover, there is no confidence that these constituents have to them available the tools to view the previously recorded meeting. Accordingly, it is suggested that another public in person meeting be scheduled and that the comment period be extended to a date that is reasonably after such a meeting. Trump Village West is willing to provide free of charge space that has a public assembly permit.

The IRM by their nature were intended to be only interim with further final measures anticipated yet NYSDEC seems eager to close out the work and recommend "no further action" despite continued development on the western portion of the contamination plume.

In addition to the procedural objections above after having viewed the entire presentation that was recorded on October 14, 2021 Trump Village West submits that it is not appropriate to issue a "no further action" recommendation at this time. Of particular concern was the over generalized presentation which only addressed the general impact of contaminants that are found at similar MGP sites without actually providing members of the public specific measurements at the

Dangman MGP site. It does not seem possible to determine that an IRM on a contaminated site has been effective without establishing the baseline in terms of a safe level of air and ground contaminants detected, the actual measurement prior to the IRM, and the actual measurement subsequent to the IRM. This very basic information was not presented.

In addition, the information presented at the meeting as well as in some of the materials in the link provided on the flyer are contradictory. While there were some statements made stating that IRM was completed Section 5 of the Arcadis report to National Grid dated May 2018 states that there remains MGP related contamination in soil and groundwater at the site following the remediation activities. A closing out of the remediation on OU-1 seems incongruous with the statement that contamination continues to exist or if it is not incongruous it was inadequately explained.

The presentation and written materials indicate that although the investigation of the Dangman MGP occurred between 2009-2013 the only reason the IRM was undertaken at this time was due to the development of the 486-532 Neptune Avenue parcel. As you are aware, the development of that site is ongoing and has not concluded. According to the documents disseminated the OU-I area contained in Block 7273 Lot IR had a shopping center situated above the contaminated area and it was only with the removal of the shopping structure that National Grid was able to implement the IRM. However, it should be known to the NYSDEC and National Grid that there remains a vacant portion of the shopping center structure situated above the western portion of the contamination plume whose demolition is imminent. There has been no adequate consideration of this fact.

The Arcadis report states, "NAPL saturated or coated soil was observed in limited, discrete intervals in soil boring B-1." The Arcadis report identifies that the northwestern portion of the 1 R lot contained the gas holder, tar tank, and cistern and these were the likely sources of non-aqueous phase liquid (NAPL) releases from the former MGP and the NYSDEC presentation stated that contamination migrated significantly to Northwest and somewhat to south to Trump Village West property. There was some tangential reference to soil vapor barriers because there was a continuing concern of migration of the contaminants through the soil.

Migration is a concern as OU-I vs. OU-2 clean up delineation does not seem to be based on science but based on a block and lot designation. Yet incongruously there has been no consideration of applying the IRM to the portion of the property to the west which is just now being demolished and developed. How can a plume of contamination have a line drawn via a block and lot designation and deem that clean-up is complete without the clean up on of OU-2. There are testing wells on OU-2 on Trump Village West property that have not been tested through the multi-year contamination to ascertain if the plume has migrated. At a minimum, further investigation should be undertaken on the OU-I site on the west portion of the contamination plume that is currently under development as the opportunity to do so is presented by the demolition of the shopping structure that was previously obstructive.

The NYSDEC presentation also did not contain any information with regard to the impact of the demolition and construction activity at the Lot 1 R site by the current owners and developers in light of the geology of the property. Due to their being no bedrock the newly constructed shopping center required the installation of piles which is a rather concussive procedure. Although Trump

Village West is not privy to the construction plans for the remainder of the site, the information previously provided is that the intention is to build multi-story residential towers. As such, it can be expected that additional piles will be installed which will penetrate and disturb the ground soil at depths where contaminants have been detected. There is no indication how any of these issues are being addressed.

Accordingly, it is respectfully submitted that additional information must be provided and considered and a further opportunity for interested members of the public to obtain that information and comment must be afforded.

Very truly yours,  
Malvina Lin

**RESPONSE 7:** Although, oftentimes IRMs are a precursor to a more thorough remedy, they can also be the final remedy as has been the case at numerous sites across the state. Due to the site's planned redevelopment activities, there was a limited window of opportunity to implement the remedy. Procedurally, IRMs were needed to be able to complete the work in an expedited manner. The remedy itself is consistent with the approach taken at other sites, which includes removal of source material and treatment of remaining contamination. The NYSDEC believes that the implemented interim remedial measures (IRMs), along with the forthcoming SMP and institutional and engineering controls, are sufficient to be protective of human health and the environment on OU-1.

The site's contamination primarily exists within the boundaries of the current Block 7273 Lot 1001 property (formerly part of Lot 1R) and at depths where future exposure is unlikely. This property has recently been designated as OU-1. The majority of the site's remaining contamination is now beneath a large commercial structure which acts as a cover system providing a physical barrier to exposure. The final survey will be completed for inclusion in the site's environmental easement. This will ensure that any future development on-site (OU-1) where the potential for remaining contamination exists, will be required to adhere to the procedures in the SMP.

The virtual public meeting was announced via the NYSDEC's listserv on 9/30/21, two weeks before the meeting, consistent with the Department's "go paperless" policy implemented several years ago. It has been determined that virtual meetings comply with the applicable laws and regulations and are an acceptable format for public meetings. The presentation has been recorded so anyone who could not attend the meeting can access the meeting. Paper fact sheets were also mailed to nearby residents and this will continue to be the case for future site related notifications. To date, the public has not made any site related inquiries or requests for another meeting.

Finally, regarding the content of the October 14<sup>th</sup> presentation, the presentation was designed to provide a general overview of the site contamination, the remedial work that was performed and the forthcoming institutional and engineering controls. A more thorough evaluation of the site data and remedy completion activities are presented in the site's remediation investigation and construction completion reports available on DEC Info Locator at the following link:  
<https://www.dec.ny.gov/data/DecDocs/224047/>

Sive, Paget, Riesel and 532 Neptune Associates, LLC submitted a letter (dated October 29<sup>th</sup>, 2021) which included the following comments:

Dear Mr. Miller:

We represent 532 Neptune Associates LLC, the owner of the real property that comprises Operable Unit 1 of the Dangman Park MGP site. On behalf of our client, we offer the following comments on the February 2020 Proposed Remedial Action Plan (“PRAP”):

**COMMENT 8:** Page 3, Site Usage: Please delete “but is vacant” at the end of the second sentence, as a few tenants are still in occupancy.

**RESPONSE 8:** Comment accepted.

**COMMENT 9:** Page 4, Section 4: Should be revised to reflect the alternatives evaluated in the PRAP.

**RESPONSE 9:** This section is accurate. The PRAP evaluated an alternative to meet the site’s reasonable anticipated future use (restricted residential).

**COMMENT 10:** Page 4, Section 5, penultimate paragraph: Please delete “for which National Grid is not responsible” at the end of the first sentence. This text suggests that National Grid is not responsible for any soil vapor contamination at the site, which conflicts with statements on page 8 related to MGP contaminants identified in sub-slab soil vapor. To the extent this phrase is intended to address non-MGP contamination only, the following paragraph states that National Grid is not responsible for non-MGP contamination.

**RESPONSE 10:** Comment accepted.

**COMMENT 11:** Page 4, final paragraph: Please change “will be addressed” to “have been addressed”, as the owner installed a vapor barrier during construction and has provided the relevant drawings to NYSDEC.

**RESPONSE 11:** NYSDEC and NYSDOH agree that the site owner has taken action to limit the potential for soil vapor intrusion due to non-MGP related contamination. Additional measures, if any, will be addressed separately by NYSDEC.

**COMMENT 12:** Page 7, Section 6.2: Please update the last sentence of this section to reflect the date of the final Construction Completion Report.

**RESPONSE 12:** Comment addressed.

**COMMENT 13:** Page 10, Site Cover: Please revise the discussion as follows, to reflect the fact that the new building is part of the site cover: “A site cover currently exists on the site, comprised of the new building slab and vapor barrier, paved surface parking areas, sidewalks or soil where the upper two feet of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for restricted residential use. The site cover will be maintained to allow for restricted residential use of the site. Any site redevelopment will include a site cover. 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).”

**RESPONSE 13:** Comment accepted.

**COMMENT 14:** Page 11, Institutional and Engineering Control Plan, bullet 2: This requirement should be deleted. National Grid has already investigated and remediated the site, the site has been redeveloped and the Department has determined that no further action is required.

**RESPONSE 14:** The NYSDEC has determined that bullet 2, under the institutional and engineering control plan, will remain. Although no further action is required, additional environmental sampling may be required during site management should the area become accessible.

**COMMENT 15:** Page 12, first bullet: The requirement for groundwater monitoring should be deleted; our understanding is that ongoing groundwater monitoring would not be required and the Owner has not consented to the installation of monitoring wells on its property.

**RESPONSE 15:** Following the site’s redevelopment, a significant on-site groundwater monitoring network is not feasible on OU-1. However, additional groundwater monitoring wells will be required along the downgradient perimeter of the site to monitor the performance of the remedy.

**COMMENT 16:** Exhibit A, page 5 – Please delete the following sentence: “Non MGP contaminants identified during the environmental investigations will be addressed separately by the NYSDEC.” As noted above, the Owner has already installed a vapor barrier.

**RESPONSE 16:** This language will remain. Actions related to non MGP contaminants, if any, will be determined and addressed by the Department.

**COMMENT 17:** Finally, we understand that National Grid has proposed conforming the OU-1 boundary to the existing building footprint. The Owner supports this request.

**RESPONSE 17:** The site boundary outlined in the Proposed Remedial Action Plan was an approximation. The NYSDEC has since evaluated National Grid’s February 14, 2022, letter for defining the site’s limits and concurred with their proposal. The basis for defining the site boundary has taken into consideration various factors including the site’s consent order, the footprint of the former MGP, and the environmental data that is available. The final site limits will be surveyed as part of the environmental easement.

Thank you for your consideration of these comments. Please let me know if you have any questions or require additional information.

Sincerely,  
Jennifer Coghlan

National Grid submitted a letter (dated October 29<sup>th</sup>, 2021) which included the following comments:

Dear Mr. Miller:

The New York State Department of Environmental Conservation (NYSDEC) issued a Proposed Remedial Action Plan, Operable Unit Number 01 (PRAP; February 2020) for the K - Dangman Park MGP site (“Site”) located at 486 Neptune Avenue, Brooklyn, New York. As part of the public review process for the PRAP, the NYSDEC provided for a comment period that was originally scheduled to run through March 27, 2020 but which has been extended to October 30, 2021. By this letter, National Grid is providing comments on the PRAP. The comments were generally discussed during past conversations, including a March 10, 2020 conference call among representatives of National Grid, NYSDEC, and Arcadis; National Grid transmitted a summary of the March 10, 2020 call to NYSDEC via email on March 12, 2020.

#### National Grid’s PRAP Comments

**COMMENT 18:** Section 5, page 4: “The PRPs for the site, documented to date, include: National Grid”.

A. The correct entity name is The Brooklyn Union Gas Company d/b/a National Grid NY, and the PRAP should be modified accordingly.

B. It is National Grid’s position, for former MGP sites, that the current property owner should be added to the list of PRPs. At this Site, this is particularly appropriate due to the presence of chlorinated volatile organic compounds (VOCs) in soil vapor and indoor air samples, resulting from former dry-cleaning operations not associated with the former MGP operation. Including the current property owner as a PRP has occurred at the K - Wythe Ave. Station site (Site No. 224069) OU 2, by way of example.

**RESPONSE 18:** The correct PRP name will be updated. The NYSDEC does not believe it is prudent to add the site owner as a PRP at this time. As indicated in the PRAP, insufficient data is currently available to determine the source of the chlorinated solvent contamination and additional investigation would be needed to determine its nature and extent. This contamination may warrant additional investigation in the future if the site becomes accessible. Contamination that is not related to the former MGP will be addressed separately by NYDEC.

**COMMENT 19:** Section 6.2, second full paragraph under the “Gypsum Injections” Header: the PRAP identifies May 2018 as the date of the Construction Completion Report (CCR).

A. The date of the CCR should be changed to June 2020, the date of the final version of the CCR.

B. Please note that the final version of the CCR should also replace the May 2018 draft CCR that is on the DECInfoLocator at <https://www.dec.ny.gov/data/DecDocs/224047/>.

**RESPONSE 19:** Comment Accepted. The June 2020 document has been placed in DECInfo Locator at the above link.

**COMMENT 20:** Section 6.4, last sentence of the second paragraph: the PRAP states, “The potential exists for the inhalation of site contaminants due to soil vapor intrusion for both on-and off-site structures and for any future redevelopment.”

A. This sentence is inconsistent with the findings detailed in the RI Report and with the last sentence of PRAP Exhibit A: “No off-site soil vapor intrusion was determined necessary.”

B. National Grid requests that the OU 1 Record of Decision (ROD) make clear that the former MGP operation has no nexus to any potential soil vapor intrusion. (See also Comment No. 6, below.)

**RESPONSE 20:** The NYSDEC concurs that based on the sampling results, and for the MGP-related contaminants associated with this site, soil vapor intrusion has not been identified to be a current issue of concern. This issue has been further investigated by NYSDEC and no current indoor air impacts have been identified, however this is a potential future exposure pathway for this site. The exposure assessment has been updated to clarify this concern.

**COMMENT 21:** Section 7, second and sixth bullets under item 3.a.: the PRAP identifies that the Institutional and Engineering Control Plan will include “a provision for further investigation and remediation...” and “a provision for future excavation and remediation of area 2...if the area becomes accessible in the future”, respectively. The text in these bullets runs counter to NYSDEC’s approval of the RI Report, which documented that the nature and extent of MGP-related impacts had been defined, and to approvals and agreements with NYSDEC regarding the objectives and scope of the OU 1 remedy and other PRAP text, including (but not limited to) the following identified in Section 1, second paragraph:

- Interim Remedial Measures (IRMs) attained the remediation objectives identified for the Site; and
- No further action remedy is, pending public input, the NYSDEC’s final selection of the remedy for the Site.

In addition, future excavation and remediation of Area 2 (within OU-1) was not part of the remedial approach accepted by NYSDEC in 2017 when it was determined during the IRM that

Area 2 was inaccessible. This acceptance is documented in a series of letters transmitted between National Grid and NYSDEC during October 2017 (see Attachment 1).

During our March 10, 2020 conference call, NYSDEC stated that PRAP text regarding a provision for further investigation and remediation was not 100% applicable to the Site and that they would internally discuss modifications to the PRAP. National Grid requests that the ROD be modified to specify no further investigation or remediation of OU 1.

**RESPONSE 21:** The NYSDEC has determined that bullet 2, under the SMP institutional and engineering control Plan, will remain. The bullet has been revised to specifically reference the investigation and remediation of Area 2. In addition, although no further action is required by the ROD, additional environmental sampling (e.g., long-term groundwater monitoring) will be required during site management.

The sixth bullet has been removed and the requirement for Area 2 has been incorporated into bullet 2 instead. Note that the NYSDEC agreed to proceed with the IRM without addressing Area 2 given the conditions that existed at that time as discussed in National Grid's October 2<sup>nd</sup>, 2017 letter. Although remediation of Area 2 was not feasible at the time, the NYSDEC believes it is appropriate to include measures in the SMP to address Area 2 if site conditions change in the future that would allow the work to be completed.

**COMMENT 22:** Section 7, the first bullet under item 3.b., and Exhibit A, the last sentence of the fourth paragraph under the "Groundwater" Header: the PRAP identifies groundwater monitoring to assess the performance and effectiveness of the remedy. However, there were no prior requirements for additional groundwater monitoring for the Site.

The extent of downgradient impacts was delineated during the Remedial Investigation (RI), as detailed in the NYSDEC-approved RI Report and, with NYSDEC's approval, all monitoring wells on Operable Unit Number 01 (OU 1) were abandoned in 2016 (except MW-14 due to inaccessibility at the time). NYSDEC's Site Records identifies that groundwater contamination is bounded within the Site, except that "groundwater contamination likely extends off-site to the north but the well across Neptune Avenue, (MW-20), indicates that groundwater contamination does not appear to go beyond the street." In fact, no volatile or semi-volatile organic compounds were detected at concentrations exceeding groundwater standards, criteria or guidance in the groundwater sample collected from MW-20, and the vast majority were not detected at all (see RI Report Tables 25 and 26, copy included in Attachment 2 along with Site plan showing well locations). Accordingly, National Grid requests that the requirement for additional groundwater monitoring be removed.

**RESPONSE 22:** Following the site's redevelopment, a significant on-site groundwater monitoring network is not feasible on OU-1. However, additional groundwater monitoring wells will be required along the downgradient perimeter of the site to monitor the performance of the remedy.

**COMMENT 23:** Section 7, the second bullet under item 3.b: the PRAP identifies monitoring for vapor intrusion for any new building developed on the Site as may be required by the Institutional



and Engineering Control Plan. National Grid requests that the OU 1 ROD make clear that the former MGP operation has no nexus to any potential soil vapor intrusion.

In support of this request, the following is offered. As identified in the NYSDEC's Site Record, PRAP Section 5, and PRAP Section 6.3, indoor air samples showed no elevated MGP-related constituents; however, non-MGP impacts (i.e., chlorinated VOCs) were detected in soil vapor and indoor air samples. Additionally, as identified in the NYSDEC-approved Dangman Park Remedial Investigation Report (RI Report; July 2014) and Dangman Park Supplemental Remedial Investigation Report (SRI Report; September 2016): "Post-MGP operations, such as a dry cleaner, are likely a source of chlorinated VOCs detected in the media at the Site. Post-MGP site uses, such as fill, parking lots and adjacent roadways, are potential sources of shallow petroleum impacts detected in the media at the Site."

**RESPONSE 23:** See Response #20

**COMMENT 24:** Operable Unit boundary: redevelopment by the property owner is in progress for Lot 1R. Phase I (eastern portion of Lot1R) was recently completed, and National Grid understands that construction for Phase II is anticipated to start early in 2022. The OU 1 boundaries, as shown on PRAP Figure 2 include part of the Phase II Redevelopment where MGP-related impacts are deep (generally deeper than 70 feet below surface) and beyond the limits of the subsurface activities related to the redevelopment. Therefore, National Grid requests that the western OU 1 boundary line-up with the current building (recently completed Phase I Redevelopment), and not include the Phase II Redevelopment. See attached Figure. The request is further supported by the limits of shallow (within 20 feet of ground surface) soil contamination and groundwater table impacts, which were defined as part of the RI and fall within the proposed OU 1 boundaries on the attached Figure.

**RESPONSE 24:** The site boundary outlined in the Proposed Remedial Action Plan was an approximation. The NYSDEC has since evaluated National Grid's February 14, 2022, letter for defining the site's limits and concurred with their proposal. The basis for defining the site boundary has taken into consideration various factors including the site's consent order, the footprint of the former MGP, and the environmental data that is available. The final site limits will be surveyed as part of the environmental easement.

**COMMENT 25:** General: the presence of petroleum-related impacts is noted in several places in the PRAP. Possible sources of petroleum impacts were identified in correspondence between National Grid and NYSDEC during the RI and in the Final RI Report (July 2014) – see Attachment 3. National Grid requests that text be added to the OU 1 ROD stating that there are other potential sources of petroleum unrelated to the MGP, including post-MGP site uses such as parking lots and adjacent roadways. As such, the petroleum-related compounds found in soil are not considered MGP-related contaminants of concern. By way of example, NYSDEC has previously used similar language with respect to petroleum-related soil impacts in the K - Nassau Works MGP (Site No. 224019B) ROD (p. 20).

**RESPONSE 25:** The NYSDEC acknowledges that there are several possible sources of petroleum contamination found at the site. However, as stated in the NYSDEC's August 22, 2014 letter,

petroleum impacts would also be expected due to the site's past operations as an MGP. This letter also states that National Grid would be responsible for addressing petroleum impacts comingled with MGP waste under their consent order. As the NYSDEC is not requiring any additional remedial action at OU-1, this concern is not warranted.

National Grid appreciates the NYSDEC's support and responsiveness to this project. If you have any questions or require any additional information, please do not hesitate to contact me at (347) 452-5973 or at [donald.campbell@nationalgrid.com](mailto:donald.campbell@nationalgrid.com).

Yours Sincerely,  
Donald P. Campbell  
Project Manager

# **APPENDIX B**

## **Administrative Record**

**K – Dangman Park MGP Site  
Manufactured Gas Plant Project  
Brooklyn, Kings County, New York  
Site No. 224047**

1. Proposed Remedial Action Plan for the K – Dangman Park MGP site, dated February 2020, prepared by the Department.
2. Order on Consent, Index No. A2-0552-0606, between the Department and KeySpan, executed on February 22, 2007.
3. Final Remedial Investigation Report – dated July 2014, prepared by Arcadis of New York.
4. Final Supplemental Remedial Investigation Report – dated September 2016, prepared by Arcadis of New York.
5. Final Interim Remedial Measure Design Work Plan – dated November 2016, prepared by Arcadis of New York.
6. Final Construction Completion Report – dated June 2020, prepared by Arcadis of New York.
7. PRAP comment letter dated October 29, 2021 from Malvina Lin, P.C. (Trump Village West).
8. PRAP comment letter dated October 29, 2021 from Sive, Paget, Riesel and 532 Neptune Associates, LLC.
9. PRAP comment letter dated October 29, 2021 from National Grid.