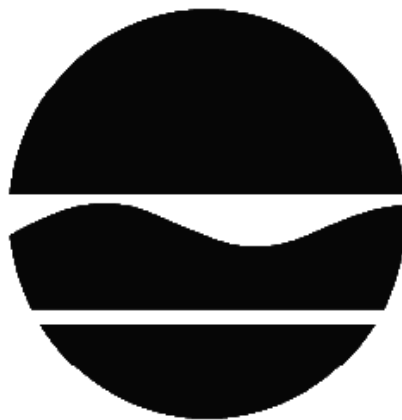


# PROPOSED DECISION DOCUMENT

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CE - E. 21st St. Works  
Operable Unit Number 01: MGP Site  
Voluntary Cleanup Program  
New York, New York County  
Site No. V00536  
October 2017



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

# **PROPOSED DECISION DOCUMENT**

CE - E. 21st St. Works  
New York, New York County  
Site No. V00536  
October 2017

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## **SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN**

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Decision Document (PDD). The disposal or release of contaminants at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." This document is a summary of the information that can be found in the site-related reports and documents in the document repositories identified below.

## **SECTION 2: CITIZEN PARTICIPATION**

The Department seeks input from the community on all Proposed Decision Documents. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repositories:

Manhattan Borough President Gale A. Brewer's Office  
19th Floor  
1 Centre Street  
New York, NY 10007  
Phone: 212-669-8300

Epiphany Branch, New York Public Library  
228 E. 23 St.  
New York, NY 10010  
Phone: 212-679-2645

**A public comment period has been set from:**

**10/11/2017 to 11/10/2017**

**A public meeting is scheduled for the following date:**

**10/24/2017 at 7:00 PM**

**Public meeting location:**

**JHS 104, 330 E. 21st Street**

At the meeting, the findings of the remedial investigation (RI) and the alternatives analysis (AA) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the Proposed Decision Document.

Written comments may also be sent through 11/10/2017 to:

Douglas MacNeal  
NYS Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway  
Albany, NY 12233  
douglas.macneal@dec.ny.gov

The proposed remedy may be modified based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein.

### **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 21 acre East 21st Street Works former Manufactured Gas Plant (MGP) site is located in the borough of Manhattan in New York City, New York County. The former MGP was situated within what is now Peter Cooper Village, a residential apartment complex, bounded by East 20th Street to the south, First Avenue to the west, East 23rd Street to the north and Avenue C to the east.

**Site Features:** The general topography of the site is flat, but slopes gently toward the east. Approximately 50% of the site is occupied by 21 fifteen-story apartment buildings; the other half is grass and landscaped areas, asphalt roads and walkways, concrete, cobblestones, playgrounds, and tennis and basketball courts. All of the Peter Cooper Village apartment buildings reportedly have full basements except for one which is constructed with crawl spaces and a central basement corridor. The Peter Cooper Village complex is fenced along its perimeter with several gateways for access to the complex and surrounding streets. The subsurface contains a complex web of underground utilities typical of an urban area.

**Current Zoning:** The New York City Planning Commission designates the majority of the property as R7-2: Moderate to High-Density Residential District.

**Past Use of the Site:** The site was originally part of the East River, with the historic shoreline located approximately 1,500 feet to the northwest of the existing waterfront (approximately First Avenue). The area has undergone extensive filling activities. Historic filling along waterfront areas was generally carried out unregulated, using a wide variety of materials including construction debris, organic soil matter, excavated material from adjacent construction sites, and miscellaneous debris. Therefore, the composition and condition of these materials are highly variable. This mix of material is still present in the subsurface today.

The former East 21st Street Works was built on this fill material and operated circa 1848 to 1945. Coal gas manufacturing operations reportedly started with 19 retorts circa 1848, and the MGP continued to expand throughout the late 1800s and early 1900s, before being closed in 1945. The current residential complex was built shortly thereafter.

**Operable Units:** The site is divided into three Operable Units (OUs). Operable Unit 1 (OU1) consists of the area within the Peter Cooper Village complex including adjacent sidewalks up to the curbs along surrounding streets. OU2 consists of the impacted off-site areas to the east, including the Stuyvesant Cove Park and the East River. OU3 consists of the bedrock impacts, both beneath the site and off-site.

**Site Geology and Hydrogeology:** The soils beneath the site are made up of four units of varying thickness. Starting at the ground surface, these units consist of man-made fill; organic clay, silt, and peat; silty sand with varying amounts of silt and clay; and a dense silt, sand, and gravel.

The fill material typically consists of intermixed sand, silt, and gravel with varying amounts of wood, brick, concrete, boulders, ash, cinders, glass, and metal fragments. In general, the fill depth is shallow in the western portion of the site near First Avenue and deep to the east towards the East River. The uppermost layer of fill, approximately five feet thick, was observed over the majority of the site and appears to represent material brought to the site during the construction of Peter Cooper Village to regrade the property and prepare it for landscaping. Much of the contamination found on the site is in the lower fill, which was the ground surface during the period when the MGP was operating.

Beneath the fill, a layer of organic soil (peat) is present in some portions of the site, ranging in thickness from 0.5 to 20 feet. A silty sand unit beneath the peat extends to depths of 120 to 150

feet. Beneath this, a dense glacial till unit made up of compacted silt, sand, and gravel lies directly on top of the bedrock.

The bedrock beneath the site is schist. The bedrock surface dips steeply eastward from an elevation of approximately 10 feet above sea level at the western edge of the site to an elevation of approximately -118 feet at the eastern edge.

Taken together, the soils beneath the site constitute a single, unconfined aquifer. Groundwater occurs at depths ranging from approximately 4 to 12 ft bgs. The groundwater flow direction in all of the depth zones is to the east-northeast towards the East River. The East River is the closest surface water body to the site and is approximately 300 ft east/northeast of the eastern boundary of the former MGP.

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

A Decision Document will be issued for OU 02 and 03 in the future.

A site location map is attached as Figure 1.

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

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, at a minimum, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in DER-10, Technical Guidance for Site Investigation and Remediation are/is being evaluated.

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

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

Consolidated Edison Company of New York, Inc. (Con Edison) is managing the former MGP site in accordance with Voluntary Cleanup Agreement (VCA) Index D2-0003-02-08 as negotiated with the New York State Department of Environmental Conservation (NYSDEC).

#### **SECTION 6: SITE CONTAMINATION**

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

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- surface water
- soil
- sediment
- soil vapor
- indoor air
- sub-slab vapor

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

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

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

#### **6.1.2: RI Results**

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

- Coal Tar
- Total Polycyclic Aromatic Hydrocarbons (PAHs)

- Benzene, Toluene, Ethylbenzene and Xylenes (Btex)

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

- groundwater
- soil

## **6.2: Interim Remedial Measures**

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

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

## **6.3: Summary of Environmental Assessment**

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

**Nature and Extent of Contamination:** Based upon investigations conducted to date, the primary contaminant of concern for the site is coal tar. Coal tar is a dark, oily liquid which was produced as a byproduct of MGP operations, and which leaked from subsurface structures and pipes into the surrounding soils and bedrock. It contains both volatile and semi-volatile organic compounds. Specific volatile organic compounds (VOCs) of concern are benzene, toluene, ethylbenzene and xylenes (BTEX). Specific semi-volatile organic compounds (SVOCs) of concern are polycyclic aromatic hydrocarbons (PAHs). Coal tar belongs to a category of environmental contaminants known as non-aqueous phase liquids (NAPLs). Although NAPLs do not readily dissolve in water, they can dissolve to a small degree over long time periods, thus contaminating the groundwater which comes into contact with them. This contaminated water can then move along with natural groundwater flow beyond the contaminated source areas.

**Soil (OU1 and OU2):**

MGP-related contamination has not been identified in on-site surface soils. Concentrations of PAHs and BTEX found in surface soils slightly exceed the soil cleanup objectives (SCOs) for restricted-residential use, but are generally consistent with background levels for Manhattan soils.

On-site subsurface soils can be divided into two vertical intervals; the upper fill interval (0.2 to 5.0 ft below ground surface (bgs)) and the lower fill/natural soil interval (greater than 5.0 ft bgs). The distinction is based on the general absence of construction-type debris, the limited observation of MGP or other impacts, and the absence of elevated PID readings in the upper fill. It is likely that the upper fill represents imported material brought to the site after closure of the

MGP. Only limited MGP-related staining and odors are found in discontinuous areas in the upper fill interval.

Physical evidence of MGP-related contamination is found in the lower fill and the underlying natural soils at depths of 5 ft or more below the ground surface. These impacts, which include stained soils, sheens, NAPL blebs, and NAPL saturation are widespread throughout most of the site and are mainly found below the water table at depths ranging from 5 - 40 ft bgs. Most of the lower soils are below the water table. In general, the heaviest impacts are found within or adjacent to the former MGP structures, including gas holders, tar tanks, and the purifier house. Some of these structures have been identified and remain in place in the sub-surface. In some limited areas, lower fill and natural soils are saturated with liquid coal tar. If subsurface conditions were to change in the future, this liquid tar could move through the soils into as-yet uncontaminated areas.

MGP-related contaminant concentrations in the upper fill material are low, in keeping with this unit's history of placement after the MGP shut down. VOC concentrations in the upper fill material did not exceed individual SCOs for restricted residential use. SVOC concentrations exceeded SCOs in less than half of the upper fill soil samples, and these exceedances were generally limited to a few individual PAHs. SVOC concentrations did not exceed the total SVOC SCG for subsurface soil in any samples. Several metals were detected at concentrations exceeding the SCOs for restricted residential use, but these metals do not appear to be related to the MGP operation.

MGP-related contamination in the underlying lower fill soils is more severe and more widespread. In general, the highest concentrations of MGP constituents (BTEX and PAHs) are associated with soils exhibiting visible tar impacts. The predominant VOCs and SVOCs that exceed SCOs are BTEX and PAHs, respectively. VOC and SVOC concentrations in subsurface soils exceeded SCOs for the protection of groundwater throughout the site.

MGP-related impacts have extended to off-site subsurface soils and will be addressed as part of OU2. Similar to on-site surface soils, MGP-related contamination has not been identified in off-site surface soils.

#### Groundwater (OU1 and OU2):

MGP-related groundwater contamination is widespread throughout the site. The most commonly found contaminant is benzene, with toluene, ethylbenzene, xylene, and PAH concentrations also frequently exceeding New York Ambient Water Quality Standards (AWQS). In the shallow aquifer zone these exceedances extend to the downgradient eastern property boundary and along portions of the northern and southern boundaries. AWQS exceedances in the intermediate and deep aquifer zone extend across E. 23rd St. to the north of the site and to Stuyvesant Cove Park along the East River to the east of the site. The highest contaminant concentrations are found in the vicinity of, or downgradient of, former MGP-structures and/or observed soil impacts. However, it should be noted that the groundwater is not used as a source of drinking water.

#### Soil Vapor, Sub-Slab Vapor and; Indoor Air (OU1):



Evaluations of the potential for soil vapor intrusion at the Peter Cooper Village Apartments property were conducted between 2003 and 2012. Soil vapor, sub-slab vapor, indoor air and ambient air monitoring was conducted in and around all buildings on the property. The soil vapor and sub-slab vapor data indicates the presence of several VOCs. Some of these, notably chlorinated organic compounds, are not MGP-related. Others such as indane and indene, which have been associated with known MGP-related vapors at other sites, were detected in several soil vapor and sub-slab samples. Concentrations of benzene within soil vapor and sub-slab vapor samples ranged from 0.95 to 440 ug/m<sup>3</sup>.

Indoor air concentrations of VOCs (including BTEX) potentially associated with MGP residuals are consistent with background levels typically found in residential indoor air. Based on the results of the sampling events, it was determined that no actions were necessary to address soil vapor intrusion.

#### Sediment (OU2):

Physical evidence of MGP-related contamination, including staining, sheens, and visible NAPL is found in the sediments in the East River to the east of the site. It appears that NAPL originating in the northeast portion of the site has migrated through the subsurface eastward beneath the East River, where it is now found in lenses and stringers in the sediments beneath the river. In some locations, these impacts have reached the sediment surface, but in other locations they are found only at depth.

A background study of total PAH concentrations in surface sediments in the East River was performed to use as a baseline of comparison with PAH concentrations in the surface sediments adjacent to the site. Total surface sediment PAH concentrations exceeding the site-specific background value (70 mg/kg) are present adjacent to the site. The MGP-impacted sediment area is approximately 2000 feet long by 450 feet wide (at its widest).

#### Surface water (OU2):

The MGP-related subsurface soil, groundwater, and sediment impacts have not affected the quality of surface water in the East River, adjacent to the site.

#### Bedrock (OU3):

Physical evidence of MGP-related impacts is found in discrete fractures in the bedrock beneath the site. Fractures containing NAPL are generally greater than 57 feet below ground surface (bgs) on-site. NAPL was also observed 90 feet bgs in the Con Edison steam tunnel located beneath First Avenue just west of the site. It appears that NAPL has migrated from source areas in the overburden into fractures in the bedrock on the western part of the site where the bedrock is shallow, and has migrated deeper into the bedrock fractures.

### **6.4: Summary of Human Exposure Pathways**

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Direct contact with site-related contaminants is unlikely since contamination exists primarily beneath the surface of the site and under pavement or the on-site buildings. People may contact site-related contamination if they dig below the surface. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Environmental sampling indicates that soil vapor intrusion is not a concern for the existing buildings. Additional evaluation is necessary for any future buildings which are developed on the site. Environmental sampling indicates that soil vapor intrusion is not a concern for off-site properties.

## **6.5: Summary of the Remediation Objectives**

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

### **Groundwater**

#### **RAOs for Public Health Protection**

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

#### **RAOs for Environmental Protection**

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

### **Soil**

#### **RAOs for Public Health Protection**

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

#### **RAOs for Environmental Protection**

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

### **Soil Vapor**

#### **RAOs for Public Health Protection**

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

## **SECTION 7: ELEMENTS OF THE PROPOSED REMEDY**

The alternatives developed for the site and evaluation of the remedial criteria are presented in the alternative analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation.

The proposed remedy is referred to as the NAPL Recovery and Institutional Controls remedy.

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

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste.

2. Installation of approximately 10 product recovery wells in strategic locations. NAPL recovery wells will be located and designed to address viscous NAPL and potentially high volumes of NAPL recharge. The wells will be designed to function passively, without active pumping; however active collection may be used in the future if NAPL accumulation rates are high, or if ongoing access to individual wells interferes excessively with the operations of the site owner. NAPL will be allowed to accumulate in the wells and will be removed periodically for off-site treatment and disposal. Pre-design investigation or pilot testing may be necessary to determine the specifics of this NAPL recovery program. Additional product recovery wells may be required based on performance of the initial wells, new information, or a documented change in conditions. To the extent practicable, the wells will be located in basement or garage areas, or in other locations that are unobtrusive to the Site Owner and its tenants.

3. A site cover currently exists and will be maintained to allow for restricted residential use of the site. The current site cover has areas which slightly exceed the SCOs for restricted-residential use, but are generally consistent with background levels for Manhattan soils. Any site redevelopment will maintain the site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs or background levels. Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of

other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, cement, paved surface parking areas, sidewalks, building foundations and building slabs. In areas that may be proposed for community vegetable gardening in the future, an additional thickness of cover soil may be required, subject to Department approval in accordance with 6NYCRR 375-1.8(g)(2)(ii)(a).

4. Imposition of an institutional control in a form of a Deed Restriction for the controlled property (the site) that:

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

5. A Site Management Plan is required for the site and the surrounding parcel. This Site Management Plan will replace the Interim Site Management Plan and will include the following:

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

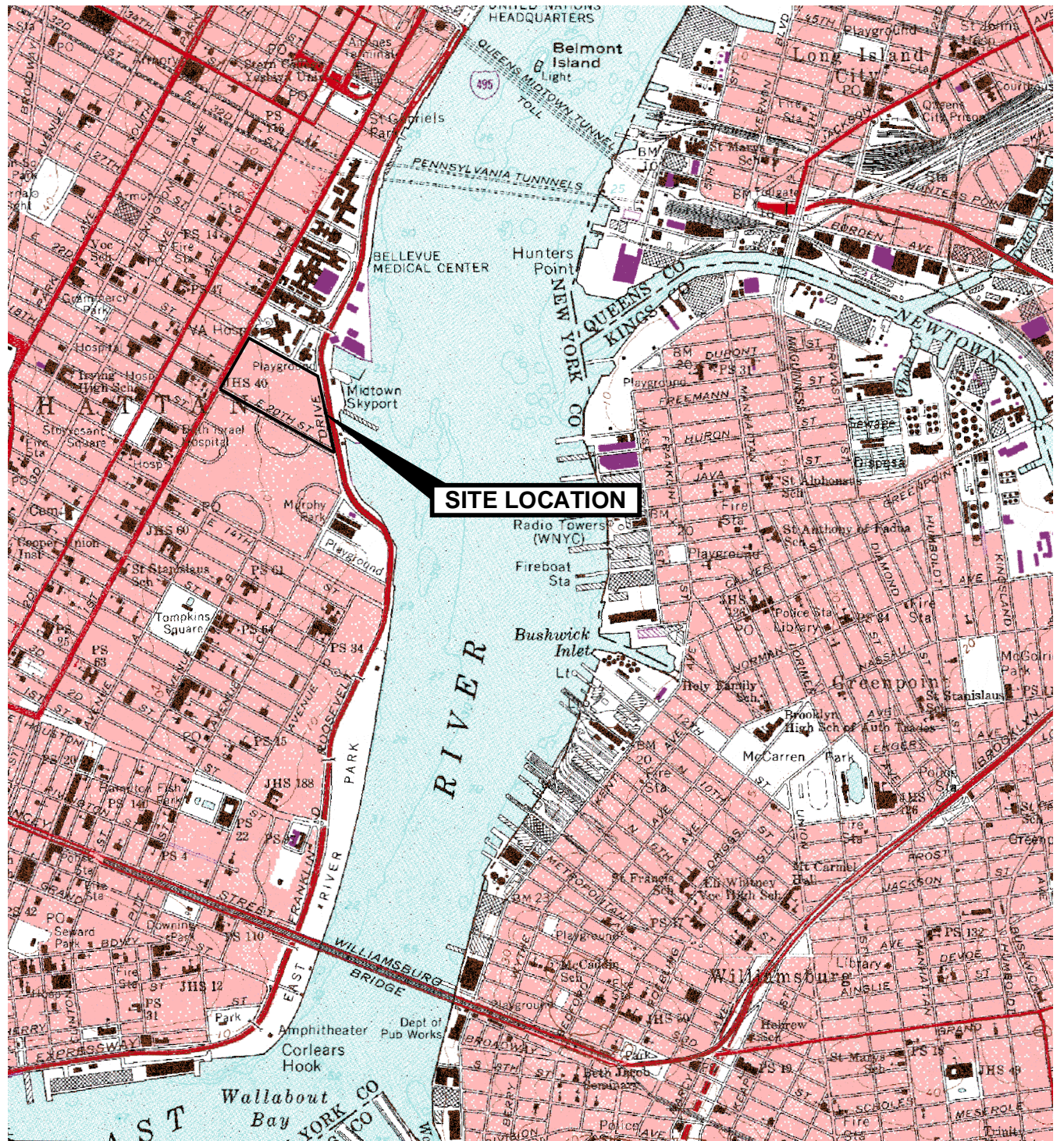
Institutional Controls: The Deed Restriction discussed in Paragraph 4 above.

Engineering Controls: The NAPL collection/removal and site cover discussed in Paragraphs 2 and 3 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of limited excavations in areas of remaining contamination;
- a provision for further investigation and remediation 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 a plan approved by the Department. Based on the investigation results and the determination by the Department 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. The Citizen Participation Plan (CPP) will continue to be in effect through this process. Any necessary remediation will be completed prior to, or in association with, redevelopment;

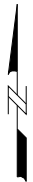
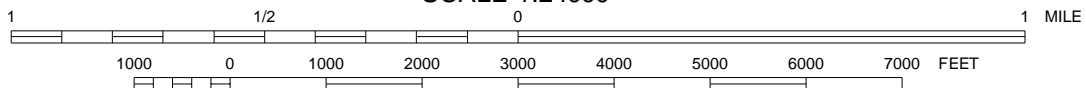
- a provision for evaluation of the potential for soil vapor intrusion for any existing buildings which are significantly modified or for buildings which may be constructed on the site in the future, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
  - provisions for the management and inspection of the identified engineering controls;
  - maintaining site access controls and Department notification;
  - descriptions of the provisions of the deed restriction including any land use and groundwater use restrictions;
  - 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 NAPL and groundwater to assess the performance and effectiveness of the remedy;
  - a schedule of monitoring and frequency of submittals to the Department; and
  - monitoring for vapor intrusion for any buildings which may be constructed on the site in the future, as may be required by the Institutional and Engineering Control Plan discussed above.
- c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
  - maintaining site access controls and Department notification; and
  - providing the Department access to the site and O&M records



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 FORMER EAST 21ST STREET WORKS  
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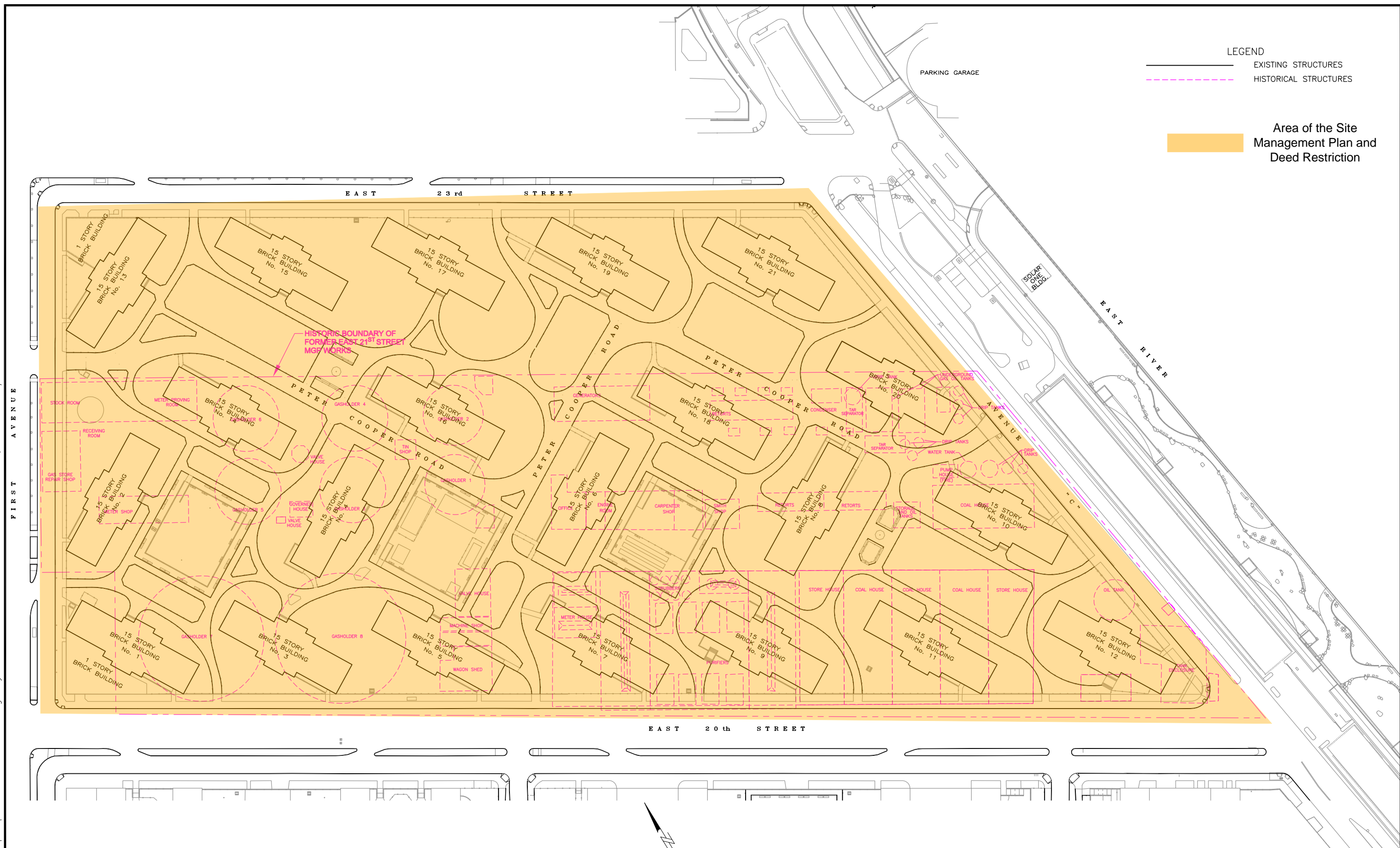
**SITE LOCATION MAP**

DATE: 11/17/08

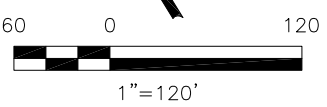
DRWN: BcV/W-MA

**FIGURE 1**

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CONSOLIDATED EDISON OF NEW YORK INC.  
FORMER EAST 21ST STREET WORKS  
01869-154-320  
DATE: 10/29/07 DRWN: MAW/BIL

PETER COOPER VILLAGE  
SITE MAP

Figure 2