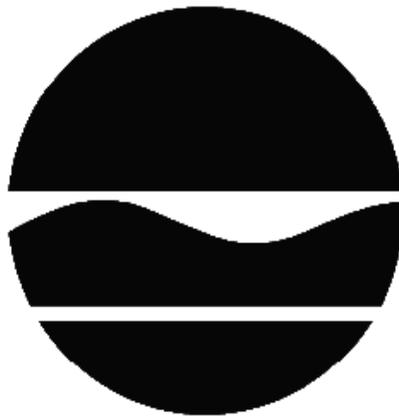


# DECISION DOCUMENT

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23-01 42nd Road  
Brownfield Cleanup Program  
Long Island City, Queens County  
Site No. C241152  
July 2014



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

# DECLARATION STATEMENT - DECISION DOCUMENT

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23-01 42nd Road  
Brownfield Cleanup Program  
Long Island City, Queens County  
Site No. C241152  
July 2014

## **Statement of Purpose and Basis**

This document presents the remedy for the 23-01 42nd Road site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 23-01 42nd Road site and the public's input to the proposed remedy presented by the Department.

## **Description of Selected Remedy**

The elements of the selected remedy are as follows:

### 1. Remedial Design

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

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

### 2. Cover System

A site cover will be required to allow for restricted residential use of the site. The cover

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

On-site soils excavated during redevelopment which meet the Groundwater Protection SCOs for VOCs, as defined by 6 NYCRR Part 375-6.8, may be used to backfill the excavation. However, any soils encountered during any future development or construction work which exhibits visual or olfactory signs of contamination, or if field screening results of the soil are positive for the presence of contamination, will not be re-used, but will be transported off-site for disposal. Contaminated groundwater encountered during construction dewatering will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by the New York City Department of Environmental Protection.

3. Vapor Mitigation

Any future on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from the subsurface.

4. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the controlled property that:

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

5. 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 4 above.

Engineering Controls: The cover system discussed in Paragraph 2 above and the sub-slab

depressurization system discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

- o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
  - o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
  - o provisions for the management and inspection of the identified engineering controls;
  - o maintaining site access controls and Department notification; and
  - o the steps necessary for the period reviews and certification of the institutional and/or engineering controls.
- b. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:
- o procedures for operating and maintaining the system(s); and
  - o compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

### **Declaration**

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

July 21, 2014

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Date



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Robert Cozzy, Director  
Remedial Bureau B

# DECISION DOCUMENT

23-01 42nd Road  
Long Island City, Queens County  
Site No. C241152  
July 2014

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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 contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

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

## **SECTION 2: CITIZEN PARTICIPATION**

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

Queens Library-Court Square  
2501 Jackson Avenue  
Long Island City, NY 11101  
Phone: 718-937-2790

### **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 BCP site is located in Long Island City at 23-01 42nd Road, Queens County. It is bordered to the north by Queens Plaza South, 24th Street to the east, 42nd Road to the south, and 23rd Street to the west.

Site Features: The site encompasses an area of 0.343 acres which was formerly occupied by a vacant two-story concrete building. The building was demolished in March 2014 for development purposes.

Current Zoning and Land Use: The site is vacant and is located in the Special Long Island City Mixed Use District within Area B of the Queens Plaza Subdistrict. It is part of the M1-5/R9 zone, which allows for light industrial use and moderate to high density residential use.

Past Use of the Site: Prior to becoming vacant, the on-site building was used for industrial processes from at least 1947, including metal stamping and fabrication of metal parts for electrical switches and fuses. Discoloration and staining of the basement floors from the on-site metal fabrications machines was noted. A Phase II investigation was conducted in September 2012. Groundwater and soil samples were collected and the results showed groundwater standards were exceeded for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals. The turbidity of the groundwater samples, which were collected from temporary well points, is unknown. As a consequence, the representativeness of the historical groundwater data is unclear. The results also showed levels above unrestricted Soil Cleanup Objectives for SVOCs, and metals. Based on the Phase II Environmental Site Investigation Report, a petroleum spill was reported to the Department on June 14, 2013 (Spill No. 13-02811).

Site Geology and Hydrogeology: Historic urban fill is the surficial unit, predominantly consisting of brown and gray, coarse to fine sand with varying amounts of silt, gravel and concrete fragments. The historic fill layer extends to depths of up to approximately 15 feet below sidewalk grade (approximately el. 1.6 relative to the Queens Highway Datum).

A layer of gray and brown silt with varying amounts of gravel, sand and clay (i.e., glacial till) exists below the historic fill.

Bedrock was encountered at depths ranging from approximately 16 feet to 25 feet below sidewalk grade (approximately el. -3.4 to el. -10.4).

The groundwater depth ranged from approximately 7 feet to 13 feet below sidewalk grade (approximately el. 3.5 to el. 5.80) and flows to the west towards the East River which is located

approximately 0.5 miles from the site.

A site location map is attached as Figure 1.

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

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, 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 Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

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

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

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

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

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

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

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

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

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

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

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

### **6.1.2: RI Results**

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

Benzene	Copper
Benzo(a)anthracene	Lead
Benzo(a)pyrene	Mercury
Benzo(b)fluoranthene	Trichloroethylene (TCE)
Indeno(1,2,3-cd)pyrene	

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

- groundwater
- soil
- soil vapor intrusion

### **6.2: Interim Remedial Measures**

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

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

## IRM-AST and UST Removal

The elements of the IRM completed in November 2013 include:

1. The cleaning and temporary closure of the 5,000-gallon aboveground storage tank (AST), including the removal and disposal of 2,558 gallons of oil/water; properly purging and cleaning the tank; and sealing the fill port.
2. The removal from the site, and the scrapping of the AST during building demolition.

The elements of the IRM completed in April/May 2014 include:

1. The cutting, cleaning and removal of three underground storage tanks (USTs). Specifically, one 550-gallon steel UST and one 630-gallon steel UST were removed from the southeastern section of the site, and one 550-gallon steel UST was removed from the northwestern section of the site. A total of 800 gallons of petroleum/liquid waste was evacuated from the tanks during cleaning activities and transferred to a vacuum truck for off-site disposal.
2. Excavation of petroleum-impacted soils consistent with a Track 4 restricted residential cleanup.

### **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.

#### Prior to IRM

##### Nature and Extent of Contamination:

Based upon investigations conducted to date, the primary contaminants of concern include trichloroethylene, benzene, carcinogenic polyaromatic hydrocarbons and some metals.

Soil - Carcinogenic polyaromatic hydrocarbons (cPAHs), including benzo(a)pyrene (BaP), benzo(a)anthracene and benzo(b)fluoranthene are found in the subsurface soil above restricted residential soil cleanup objectives (RRSCOs) in fill between 11 and 14 feet below sidewalk grade (bsg) primarily in the western and southeastern portions of the site. Metals, including mercury, lead and copper are found above RRSCOs primarily in the northwestern portion of the site in fill between 11 and 14 feet bsg. The maximum concentration of BaP (1.85 ppm) and benzo(a)anthracene (1.61 ppm) slightly exceeds the 1 ppm RRSCOs. The maximum concentration of benzo(b)fluoranthene (2.75 ppm) is moderately higher than the RRSCO (1 ppm). The maximum concentrations of mercury (1.4 ppm) and lead (597 ppm) found on-site

exceed their RRSCOs (0.81 ppm and 400 ppm, respectively). Maximum concentrations of copper (968 ppm to 1,340 ppm) exceed the RRSCO (270 ppm). Site-related soil contamination is not expected to extend off-site based on the available data.

Groundwater - Benzene is found in groundwater in the southeastern portion of the site at levels (61 ppb to 177 ppb) exceeding the groundwater standard (5 ppb). Based on the RI data, groundwater depths range from 7 to 13 feet bsg and flows to the west towards the East River. In general, benzene was not detected in downgradient monitoring wells, therefore it is not believed that benzene is migrating off-site. During the Phase II investigation, cPAHs were found in the groundwater sample collected from temporary groundwater monitoring well SB-14 (located in the northwestern portion of the site) at levels (mostly under 1 ppb) exceeding the groundwater standard (0.002 ppb). However, concentrations of cPAHs in the remaining wells were not detected above groundwater standards. Additionally, during the RI, cPAHs were not detected above groundwater standards. Therefore, based on this data, it does not appear there are any cPAH impacts to the groundwater. During the Phase II investigation, metals including copper, lead, and mercury were detected above groundwater standards in unfiltered samples. Concentration levels of copper, lead and mercury in filtered samples collected at the site as part of the RI were detected below groundwater standards. Therefore, metals are not considered contaminants of concern for groundwater.

Soil Vapor - TCE was detected in soil vapor at concentrations up to 2,000 µg/m<sup>3</sup>. TCE was not, however, detected in on-site groundwater above groundwater standards. The TCE observed in the on-site soil vapor is believed to be coming from the northern adjoining property. The northern adjoining property (23-10 Queens Plaza South) is being addressed under a separate BCP Agreement. No site-related soil vapor contamination is migrating off-site.

#### **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*.

The site is completely fenced and people will not come into contact with contamination unless they dig below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater 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. Mitigation for soil vapor intrusion will be necessary prior to reoccupying the site.

#### **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.

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

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

### **Soil**

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

- Prevent ingestion/direct contact with contaminated soil.

### **Soil Vapor**

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

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

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

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Cover and Sub-Slab Depressurization System remedy.

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

### 1. **Remedial Design**

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

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

2. Cover System

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

On-site soils excavated during redevelopment which meet the Groundwater Protection SCOs for VOCs, as defined by 6 NYCRR Part 375-6.8, may be used to backfill the excavation. However, any soils encountered during any future development or construction work which exhibits visual or olfactory signs of contamination, or if field screening results of the soil are positive for the presence of contamination, will not be re-used, but will be transported off-site for disposal. Contaminated groundwater encountered during construction dewatering will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by the New York City Department of Environmental Protection.

3. Vapor Mitigation

Any future on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from the subsurface.

4. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- requires compliance with the Department approved Site Management Plan.

5. Site Management Plan

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

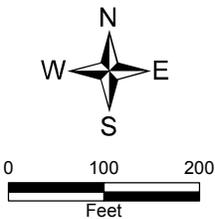
- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 4 above.

Engineering Controls: The cover system discussed in Paragraph 2 above and the sub-slab depressurization system discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

- o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
  - o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
  - o provisions for the management and inspection of the identified engineering controls;
  - o maintaining site access controls and Department notification; and
  - o the steps necessary for the period reviews and certification of the institutional and/or engineering controls.
- b. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:
    - o procedures for operating and maintaining the system(s); and
    - o compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

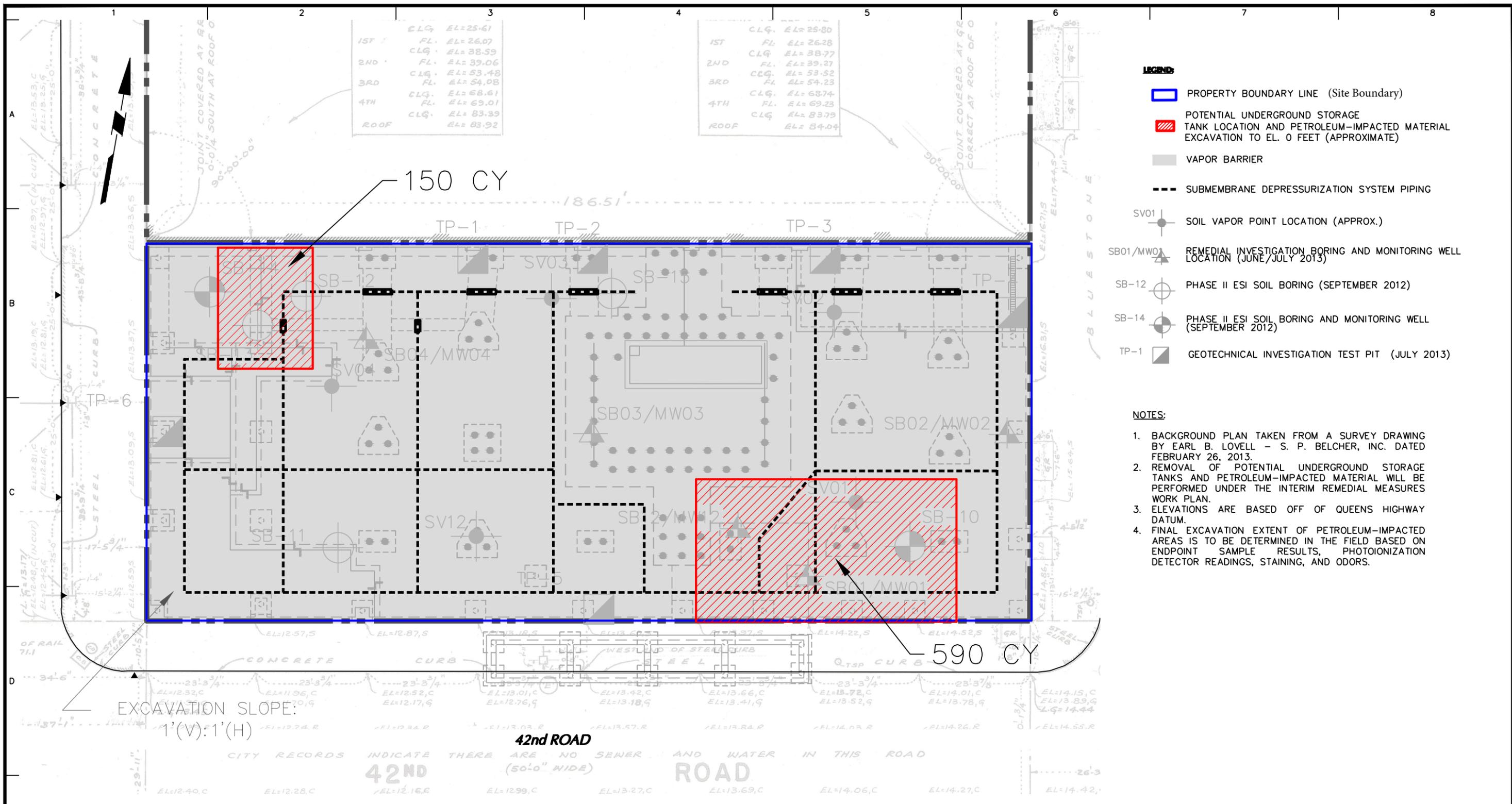


# Figure 1

## Site Location

23-01 42nd Road  
Long Island City, Queens County  
Site No.C241152





- LEGEND:**
- PROPERTY BOUNDARY LINE (Site Boundary)
  - POTENTIAL UNDERGROUND STORAGE TANK LOCATION AND PETROLEUM-IMPACTED MATERIAL EXCAVATION TO EL. 0 FEET (APPROXIMATE)
  - VAPOR BARRIER
  - SUBMEMBRANE DEPRESSURIZATION SYSTEM PIPING
  - SV01  SOIL VAPOR POINT LOCATION (APPROX.)
  - SB01/MW01  REMEDIATION INVESTIGATION BORING AND MONITORING WELL LOCATION (JUNE/JULY 2013)
  - SB-12  PHASE II ESI SOIL BORING (SEPTEMBER 2012)
  - SB-14  PHASE II ESI SOIL BORING AND MONITORING WELL (SEPTEMBER 2012)
  - TP-1  GEOTECHNICAL INVESTIGATION TEST PIT (JULY 2013)

- NOTES:**
1. BACKGROUND PLAN TAKEN FROM A SURVEY DRAWING BY EARL B. LOVELL - S. P. BELCHER, INC. DATED FEBRUARY 26, 2013.
  2. REMOVAL OF POTENTIAL UNDERGROUND STORAGE TANKS AND PETROLEUM-IMPACTED MATERIAL WILL BE PERFORMED UNDER THE INTERIM REMEDIAL MEASURES WORK PLAN.
  3. ELEVATIONS ARE BASED OFF OF QUEENS HIGHWAY DATUM.
  4. FINAL EXCAVATION EXTENT OF PETROLEUM-IMPACTED AREAS IS TO BE DETERMINED IN THE FIELD BASED ON ENDPOINT SAMPLE RESULTS, PHOTOIONIZATION DETECTOR READINGS, STAINING, AND ODORS.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

**LANGAN**  
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 Langan Engineering and Environmental Services, Inc.  
 Langan International LLC  
 Collectively known as Langan

Project  
**23-01 42nd ROAD**  
**QUEENS NEW YORK**  
 BLOCK No. 425, LOT No. 1  
 LONG ISLAND CITY

Drawing Title  
**REMEDIAL PLAN**

Project No. 170244602	Drawing No.
Date 4/23/2014	<b>2</b>
Scale 1" = 20'	
Drawn By PMM	
Submission Date -	Sheet 2 of 2