DECISION DOCUMENT

Queens Medallion Leasing
Brownfield Cleanup Program
Long Island City, Queens County
Site No. C241144
September 2016

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

DECLARATION STATEMENT - DECISION DOCUMENT

Queens Medallion Leasing
Brownfield Cleanup Program
Long Island City, Queens County
Site No. C241144
September 2016

Statement of Purpose and Basis

This document presents the remedy for the Queens Medallion Leasing 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 Queens Medallion Leasing 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 currently exists and will be maintained to allow for restricted residential use of the

site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper two feet of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for restricted residential use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

3. Vapor Mitigation
Any on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to mitigate the migration of vapors into the building from groundwater.

4. Institutional Control
Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYS Department of Health (NYSDOH) or New York City Department of Health (NYCDOH); and
- require 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 site cover discussed in Paragraph 2 and the sub-slab depressurization system discussed in Paragraph 3, above.

This 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;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- 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 historic source removal; and
- a schedule of monitoring and frequency of submittals to the Department.

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:

- procedures for operating and maintaining the remedy;
- 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;
- providing the Department access to the site and O&M records; and

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.

September 12, 2016
Date

Robert Cozzy, Director
Remedial Bureau B

DECISION DOCUMENT

Queens Medallion Leasing
Long Island City, Queens County
Site No. C241144
August 2016

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 repositories:

Queens Library at Long Island City
37-44 21 Street
Second Floor, Room 2B
Long Island City, NY 11101
Phone: 718-752-3700

Queens Community Board No. 2
Attn: Ms. Deborah Martell-Kleinert
43-22 50th Street, 2nd Floor, Room 2B
Woodside, NY 11377

Phone: (718) 533-8773

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

Site Location: The site is located approximately 0.5 miles east of the East River on the corner of 21st Street and 44th Avenue at 21-03 44th Avenue in Long Island City, Queens County.

Site Features: The site is an irregularly shaped single tax parcel approximately 0.42 acres in size. The property is developed with a single, two-story commercial building which was constructed in 1929.

Current Zoning and Land Use: The site is currently occupied and is used as a taxi dispatching facility. The area is zoned as M1-4, which allows for manufacturing, commercial and certain community uses. In the immediate vicinity of the site, there are manufacturing and commercial businesses. A New York City high school is located approximately three hundred fifty feet to the south of the site, and the nearest residential area is approximately four hundred feet south of the site, along 44th Road.

Past Use of the Site: Prior uses of the building include metal plating and the painting of radium dials. One area in the northern portion of the site contained a disposal structure that appeared to have received plating wastes. That area was reportedly remedied outside of any regulatory program by the previous site owner in 2005, when approximately 100 cubic yards of soil was excavated in two successive efforts to achieve a soil cleanup goal of 10 parts per million (ppm) for hexavalent chromium. Final endpoint sampling showed that the cleanup was successful, with the highest remaining hexavalent chromium concentration at 6.17 ppm.

Site Geology and Hydrogeology: Soil at the site consists of historic fill mixed with silty sands to a depth of approximately nineteen feet, with bedrock below this depth. Groundwater is encountered at approximately twelve feet below ground surface, and the flow is generally to the south.

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
- 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 at this site is/are:

tetrachloroethene (PCE)	benzo(a)pyrene
1,1,1-TCA	hexavalent chromium
trichloroethene (TCE)	vinyl chloride
benzo(a)anthracene	cis-1,2-dichloroethene

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.

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:
Investigations conducted during a 2008 site characterization indicated a plume of chlorinated VOCs (CVOCs), primarily tetrachloroethene (PCE), extending from the vicinity of the property at 21-03 44th Avenue to the northern edge of the Technology High School one block to the south. Hexavalent chromium is also present in site groundwater.

As a result of that study's findings, two additional investigations were performed in an effort to characterize the site. In those investigations, soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Because of the previous use of radium paint at the building, select soil and groundwater samples were analyzed for radium and it was not detected above naturally-occurring levels.

Soil:
Studies have not detected VOCs above Unrestricted Use soil cleanup objectives (SCOs) in unsaturated site soils. The most recent investigation showed the presence of PCE at 6.9 ppm in one boring at the site; however, that boring was sampled beneath the groundwater table and it appears that the contamination detected may be attributed to the high levels of groundwater contamination known to be present in the vicinity of the building.

Early studies showed soil contamination with hexavalent chromium in excess of 19,000 ppm (exceeding all use based SCOs) beneath a disposal structure in the northern portion of the building, that soil was removed during a self-directed remedial action by a previous site owner in 2005. Following the 2005 cleanup, the highest level of hexavalent chromium contamination detected was 6.17 PPM. This cleanup up was further verified in the most recent investigation, with a maximum detected concentration of hexavalent chromium of 6.4 ppm detected at a boring conducted at the area of the former disposal structure. While both levels exceed the Unrestricted Use SCO of 1 PPM, they are well below the Groundwater Protection SCO of 19 and the Restricted Residential SCO of 110 ppm.

Several PAHs, including benzo(a)anthracene and benzo(a)pyrene, were found in a limited number of samples. While these compounds were found in excess of the Restricted Residential SCO, they were not at levels beyond those generally associated with historic fill. Data does not indicate any off-site impacts in soil related to this site.

Groundwater:
Contaminants exceeding standards, criteria, and guidance in groundwater include PCE at 36,000 parts per billion (ppb) vs. a standard of 5 ppb and hexavalent chromium as high as 1,500 ppb vs. a standard of 50 ppb. Trichloroethylene, cis- 1,2-dichloroethene and vinyl chloride also exceeded standards, however to a lesser degree.

Off-site groundwater appears to be contaminated by hexavalent chromium related to the previous site use as a metal plating facility; however, a removal action undertaken by a previous site owner appears to have addressed the source, and contamination is expected to diminish with time. Groundwater monitoring will be undertaken in the Site Management phase to confirm the anticipated downward trend.

Off-site groundwater is also contaminated with chlorinated solvents, but this appears to be from an up-gradient source, as up-gradient well concentrations generally exceed down gradient well concentrations, and no VOC source has ever been found on the site.

Soil Vapor:
The most frequently detected CVOCs in sub-slab samples were PCE, TCE, and 1,1,1-trichloroethane (1,1,1-TCA). At least one of these compounds was detected in five of the six sub-slab samples at elevated concentrations. Indoor air samples also detected similar CVOCs and actions were recommended to address soil vapor intrusion.

The highest sub-slab concentration of PCE was 18,000 micrograms per cubic meter (ug/m3), and this was collocated with the highest indoor air concentration of 57 ug/m3 vs. the air guideline for PCE of 30 ug/m3. TCE was found as high as 5,700 ug/m3 in sub-slab soil vapors, and at a level of 2.4 ug/m3 in indoor air vs. the air guideline for TCE of 2 ug/m3, though this sample was not located in the vicinity of the highest sub-slab sample. 1,1,1-TCA was found at a high of 3,100 ug/m3 in sub-slab samples, and the collocated indoor air sample contained 18 ug/m3. All of the indoor air concentrations were at their highest in the first round of sampling, and concentrations of PCE and other CVOCs in subsequent sampling were either less than 1 ug/m3 or below detection limits. Data does not indicate any off-site impacts in soil vapor related to this 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*.

If people dig below the surface they may come into direct contact with contaminants in the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. 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. Environmental sampling has indicated that measures are needed to address exposures associated with soil vapor intrusion and mitigation measures are recommended to prevent soil vapor intrusion into the on-site building. Off-site contamination in soil vapor does not appear to be related to this site and will be addressed as part of the remedial activities for the Wills Building, Site #C241143, which is just north of 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.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

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 Existing Site Cover with Vapor Mitigation 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
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3. Vapor Mitigation
Any on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to mitigate the migration of vapors into the building from groundwater.

4. Institutional Control
Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

• require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
• allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
• restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYS Department of Health (NYSDOH) or New York City Department of Health (NYCDOH); and
• require 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 site cover discussed in Paragraph 2 and the sub-slab depressurization system discussed in Paragraph 3, above.

This 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;
• descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
• 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 historic source removal; and
• a schedule of monitoring and frequency of submittals to the Department.

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:
• procedures for operating and maintaining the remedy;
• 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.

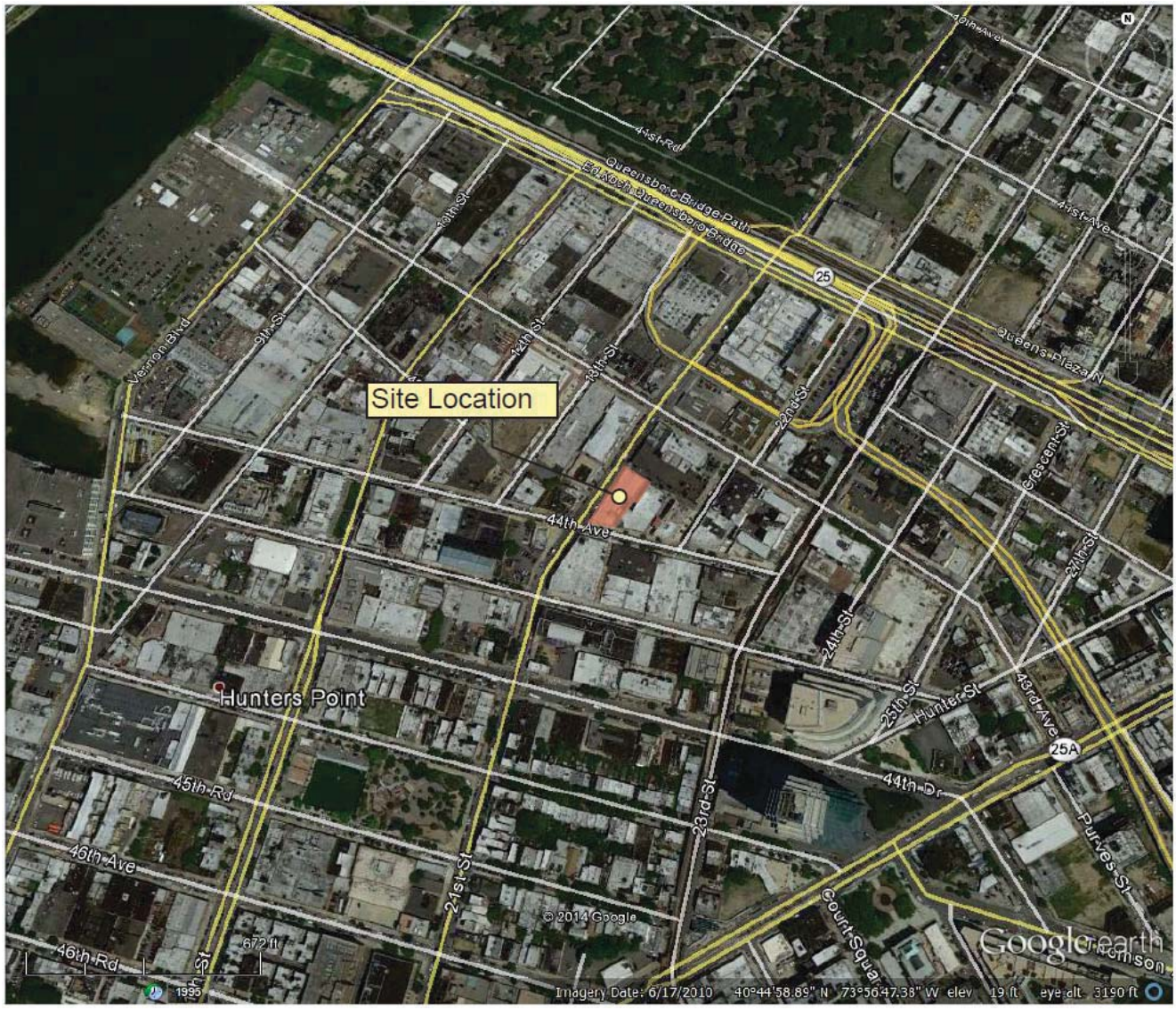
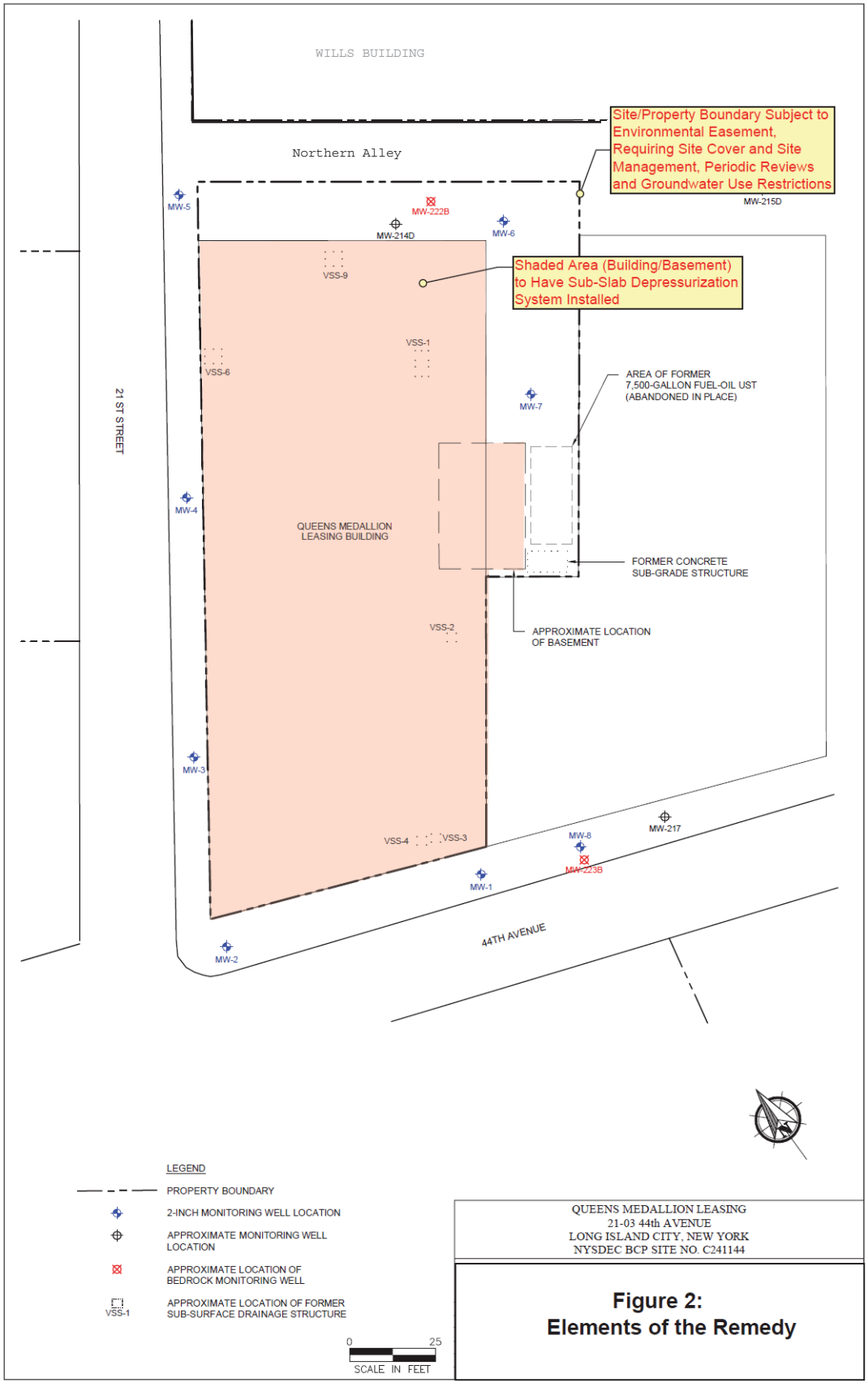


Figure 1: Queens Medallion Leasing Site Location

21-03 44th Avenue, Long Island City, NY


WILLS BUILDING
Northern Alley
Site/Property Boundary Subject to Environmental Easement, Requiring Site Cover and Site Management, Periodic Reviews and Groundwater Use Restrictions
MW-215D
MW-5
MW-222B
MW-214D
MW-6
VSS-9
Shaded Area (Building/Basement) to Have Sub-Slab Depressurization System Installed
VSS-1
VSS-6
AREA OF FORMER 7,500-GALLON FUEL-OIL UST (ABANDONED IN PLACE)
MW-7
21 ST STREET
MW-4
QUEENS MEDALLION LEASING BUILDING
FORMER CONCRETE SUB-GRADE STRUCTURE
VSS-2
APPROXIMATE LOCATION OF BASEMENT
MW-3
MW-217
MW-8
VSS-4
VSS-3
MW-223B
MW-1
44TH AVENUE
MW-2
LEGEND
PROPERTY BOUNDARY
2-INCH MONITORING WELL LOCATION
APPROXIMATE MONITORING WELL LOCATION
APPROXIMATE LOCATION OF BEDROCK MONITORING WELL
VSS-1
APPROXIMATE LOCATION OF FORMER SUB-SURFACE DRAINAGE STRUCTURE
0
25
SCALE IN FEET
QUEENS MEDALLION LEASING
21-03 44th AVENUE
LONG ISLAND CITY, NEW YORK
NYSDEC BCP SITE NO. C241144
Figure 2:
Elements of the Remedy