DECISION DOCUMENT

Former Rocket Jewelry Box Site
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203106
November 2018

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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Rocket Jewelry Box Site
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203106
November 2018

Statement of Purpose and Basis

This document presents the remedy for the Former Rocket Jewelry Box 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 Former Rocket Jewelry Box Site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

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
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy

efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all on-site soils and historic fill which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately, 12,000 cubic yards of material will be removed for remediation down to 26 feet bgs. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. If a Track 1 cleanup is achieved, an institutional control and Site Management Plan will not be required element of the remedy.

3. Backfill

As necessary, clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete required backfilling of the excavation and establish the design grades at the site.

4. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code which prohibits potable use of groundwater without prior approval.

Contingent Track 2

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required and the remedy will achieve a Track 2 Restricted Residential cleanup.

Contingent Remedial Elements

5. Institutional Controls

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 NYSDOH or NYCDOH.
- require compliance with the Department approved Site Management Plan.

6. 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 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 and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion in occupied existing buildings and for any buildings developed on the site, including provisions 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; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

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

November 29, 2018

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Former Rocket Jewelry Box Site
Bronx, Bronx County
Site No. C203106
November 2018

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 from September 19, 2018 to November 2, 2018, 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:

Mott Haven Library
321 East 140th Street
Bronx, NY 10454
Phone: 718-665-4878

Bronx Community Board 1
3024 Third Avenue
Bronx, NY 10455
Phone: 718-585-7117

Receive Site Citizen Participation Information By Email

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is located in an urban area at 414 Gerard Avenue in the Mott Haven neighborhood of the Bronx. The 12,600-square-foot (0.29 acre) lot is situated on the southwestern corner of the block bounded by East 146th Street to the north, Walton Avenue to the east, East 144th Street to the south, and Gerard Avenue to the west.

Site Features: The site is developed with a vacant, one-story manufacturing building with a partial cellar. A 3,000-gallon No. 2 fuel oil aboveground storage tank (AST) was installed in the partial cellar in 1953 (New York State Department of Environmental Conservation [NYSDEC] Petroleum Bulk Storage [PBS] Site No. 2-207209).

Current Zoning and Land Use: According to the New York City Planning Commission Zoning Map 6a, the site is located within the Lower Concourse Special Mixed Use Paired District (M1-4/R8A). This paired district promotes development and expansion of the longstanding mix of residential, commercial, industrial, and cultural use throughout the area. M1 districts typically include light industrial uses such as woodworking shops, repair shops, and wholesale service and storage facilities, and R8 districts promote residential development. Zoning is consistent with the proposed mixed-use development. The surrounding area is primarily commercial and industrial, but also includes residential buildings, public parks, day care centers, and schools. As part of the June 2009 Lower Concourse Rezoning, the site was E-Designated for hazardous materials and noise (E-227 and City Environmental Quality Review [CEQR] No. 08DCP071X).

Past Use of the Site: The site was an undeveloped vacant lot until at least 1928. A diner was located in the southern portion from 1935 to 1944; however, the site again appears vacant from 1946 to 1951. The existing on-site building was constructed in the early 1950s, and the site historically operated as a jewelry box manufacturer (Rocket Jewelry) from at least 1954 to 2016. From the 1950s through the 1970s, Rocket Jewelry manufactured jewelry packaging (including decorative boxes and textile covered metal boxes) and displays. During this time period, metal jewelry boxes were typically constructed using a mixture of metals including cadmium, copper, lead, nickel, and zinc. Lead-based paint may also have been used to decorate the outside of the jewelry boxes. Evidence of heavy machinery and nearby drains was observed throughout the first floor and partial cellar. In the 1980s, Rocket Jewelry moved the manufacturing processes overseas and maintained the Bronx-based warehouse for packaging and distribution until 2016.

Site Geology and Hydrogeology: Based on findings from the Remedial Investigation, the site is underlain by fill material predominantly consisting of brown, fine- to coarse-grained sand with varying amounts of silt, gravel, concrete, brick, glass, ash, coal, slag, and debris. The fill was observed to depths varying between about 11 and 27 feet below grade surface (bgs) beneath the partial center in the western part of the site, and between about 9 and 16 feet bgs beneath the first floor in the eastern part of the site. Glacial till that predominantly consisted of fine- to coarse-grained sand with varying amounts of gravel and silt was observed below the fill. Bedrock has been encountered at depths ranging from about 20 to 50 feet bgs. Depth-to-bedrock increased from east to west across the site footprint.

Groundwater was observed at a depth of about 20 feet bgs across the site footprint. The groundwater flow direction for the area surrounding the site is to the west towards the Harlem River.

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
- indoor air

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:

benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
benzo-(k)-fluoranthene
chrysene
dibenz[a,h]anthracene
indeno(1,2,3-CD)pyrene
barium
cadmium
lead
mercury
chromium

copper	PCB's
nickel	tetrachloroethene (PCE)
zinc	trichloroethene (TCE)

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

- 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.

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), herbicides and pesticides. Soil vapor samples were analyzed for VOCs.

Soil: The primary contaminants found in subsurface site soils are SVOCs, specifically polycyclic aromatic hydrocarbons (PAHs), and metals typically found in historic fill, which is generally present in the top 27 feet of the site. Seven PAHs were detected in soils down to 27 feet bgs during the RI, included but not limited to, benzo(a)anthracene at a maximum concentration of 5 part per million (ppm) (unrestricted use soil cleanup objective [UUSCO] is 1 ppm), benzo(a)pyrene maximum concentration at 3.9 ppm (UUSCO is 1 ppm), benzo(b)fluoranthene at maximum concentration 4.5 ppm (UUSCO is 1 ppm), benzo(k)fluoranthene at maximum 1.4 ppm (UUSCO is 0.8 ppm), chrysene at maximum 4.9 ppm (UUSCO is 1 ppm), dibenzo(a,h)anthracene at maximum 0.55 ppm (UUSCO is 0.33 ppm) and indeno(1,2,3-cd)pyrene at maximum 0.52 ppm (UUSCO is 0.5 ppm). Metals, including barium, cadmium, copper, lead, mercury, nickel, trivalent chromium and zinc were found in site soils down to 24 feet bgs. Barium at maximum 716 ppm (UUSCO is 350 ppm), cadmium at maximum 2.76 ppm (UUSCO is 2.5 ppm), copper at maximum 55.5 ppm (UUSCO is 50 ppm), lead at maximum 64.9 ppm (UUSCO is 63 ppm), mercury at maximum 0.21 ppm (UUSCO is 0.18 ppm), nickel at maximum 32.4 ppm (UUSCO is 30ppm), trivalent chromium at maximum 31 ppm (UUSCO is 30 ppm) and zinc at maximum 113 ppm (UUSCO is 109 ppm). Total PCBs were detected in two samples at concentrations above the UUSCO of maximum 0.1 ppm. Three pesticides were

detected slightly above the UUSCO. There were no herbicides detected at concentrations exceeding the UUSCOs. Data does not indicate any off-site impacts in soil related to this site.

Groundwater: One VOCs was detected in groundwater, chloroform at 26 parts per billion (ppb) which is above the ambient water quality standard (AWQS) of 7 ppb. Two SVOCs were detected above standards as follows: benzo(a)anthracene at 0.03 ppb (AWQS is 0.002) and benzo(b)fluoranthene at 0.02 ppb (AWQS is 0.002 ppb). No PCBs, pesticides or metals of concern were detected in groundwater over standards. Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor: Five soil vapor samples and one ambient air sample were collected and submitted for laboratory analysis of USEPA TO-15 VOCs. Tetrachloroethene (PCE) was detected in soil vapor at concentrations ranging from 9.9 micrograms per cubic meter (ug/m3) to 93.6 ug/m3. PCE was not detected in the ambient air sample. PCE's daughter product, trichloroethene (TCE), was detected at a concentration of 1.12 ug/m3.

Petroleum-related compounds including benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected at concentrations ranging from about 77 ug/m3 to 256 ug/m3 compared to an ambient air concentration of 8 ug/m3. Total VOC concentrations ranged from approximately 461 ug/m3 to 695 ug/m3, compared to an ambient air concentration of 18 ug/m3. 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*.

People are not expected to come in contact with contaminated soils unless they trespass on the site and dig below the surface materials. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds may move into the soil vapor (air spaces within the soil), which in turn may move into nearby buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion if the site is re-occupied or redeveloped. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

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.
- 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 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 Contingent Track 1 remedy.

The selected remedy is referred to as the Excavation and Vapor Evaluation 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

- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

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Excavation and off-site disposal of all on-site soils and historic fill which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately, 12,000 cubic yards of material will be removed for remediation down to 26 feet bgs. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. If a Track 1 cleanup is achieved, an institutional control and Site Management Plan will not be required element of the remedy.

3. Backfill

As necessary, clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete required backfilling of the excavation and establish the design grades at the site.

4. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code which prohibits potable use of groundwater without prior approval.

Contingent Track 2

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required and the remedy will achieve a Track 2 Restricted Residential cleanup.

Contingent Remedial Elements

5. Institutional Controls

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 NYSDOH or NYCDOH.
- require compliance with the Department approved Site Management Plan.

6. Site Management Plan

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

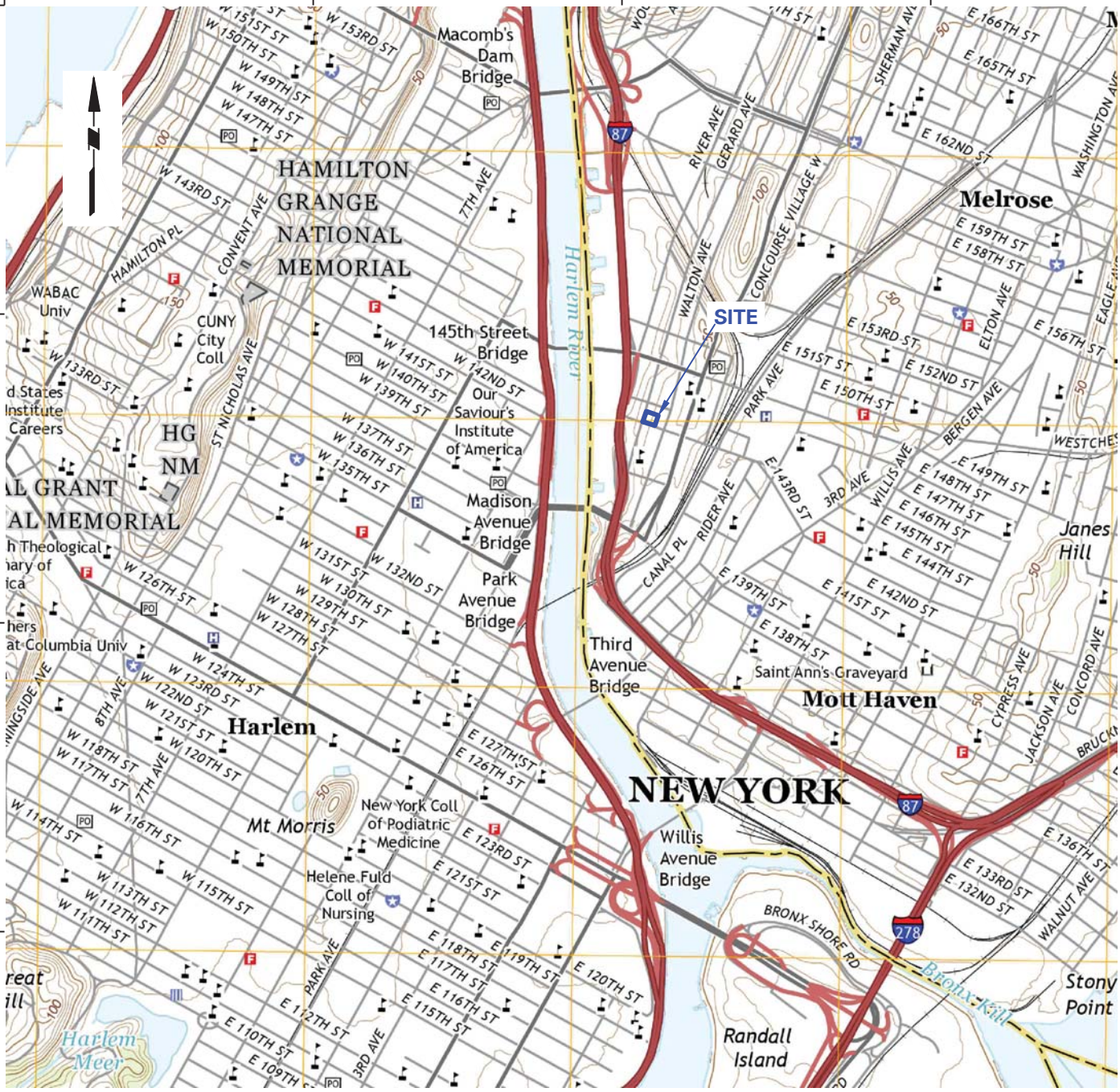
A. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
Institutional Controls: The Environmental Easement discussed in Paragraph 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 and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion in occupied existing buildings and for any buildings developed on the site, including provisions 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; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

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

- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



APPROXIMATE SITE BOUNDARY

NOTE: BASE MAP IS REFERENCED FROM THE UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5 MINUTE SERIES CENTRAL PARK QUADRANGLE MAP, DATED 2016

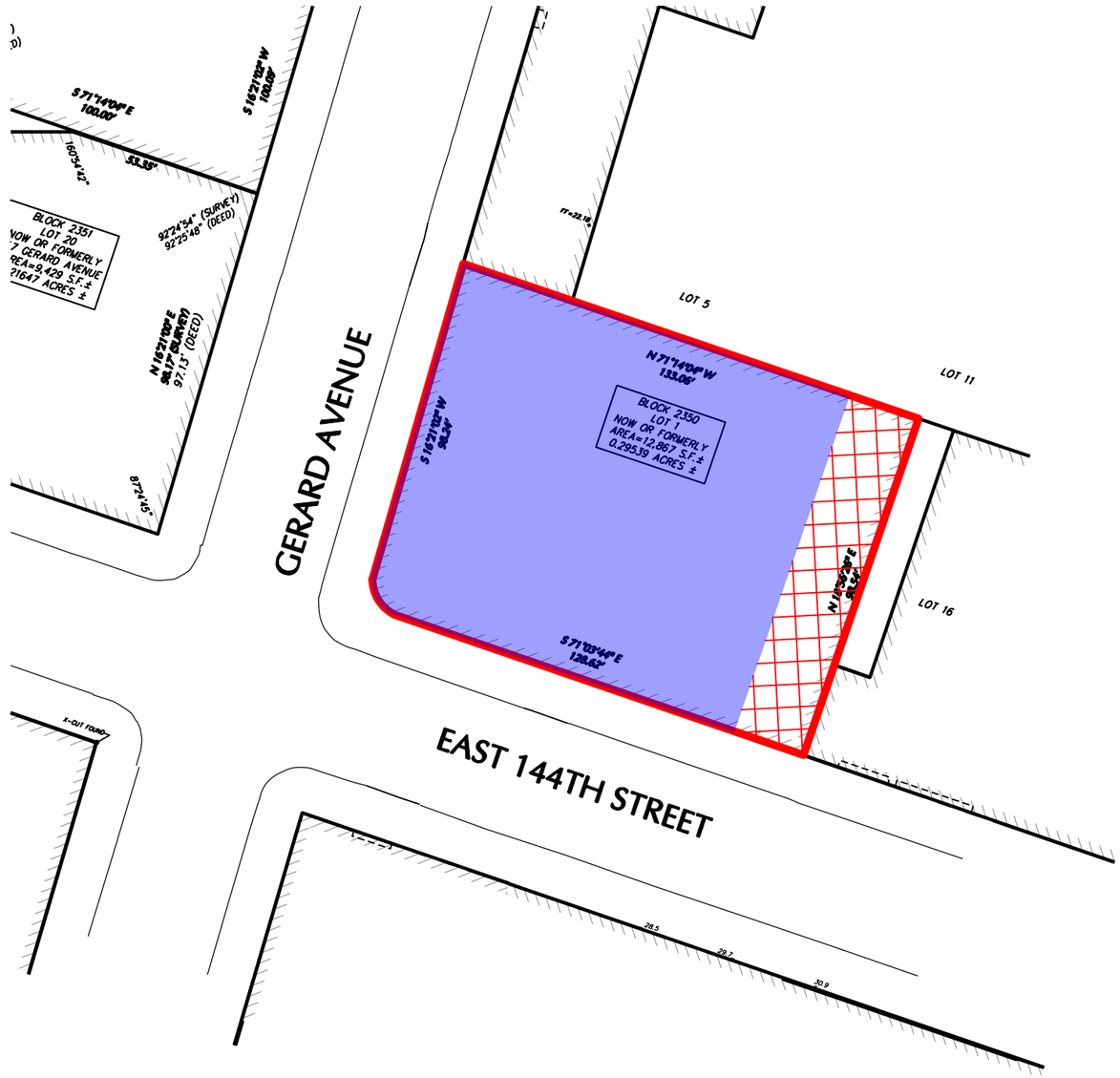
LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
414 GERARD AVENUE
BLOCK No. 2350 LOT No. 1
BRONX NEW YORK

Figure Title
SITE LOCATION MAP

Project No. 170488401	Figure No. 1
Date 08/28/2017	
Scale N.T.S	
Drawn By ALS / Checked By MLR	
Submission Date –	Sheet 1 of 11

Filename: \\langan.com\data\NYC\data4\170488401\Project Data\CAD\01\SheetFiles\Environmental\RI + WC\Figure 1 - Site Location Plan.dwg Date: 4/16/2018 Time: 14:28 User: jleung Style Table: Langan.stb Layout: ANSIA-BP



LEGEND:

APPROXIMATE SITE BOUNDARY

EXCAVATION TO ABOUT 20 TO 30 FEET BELOW GRADE SURFACE

EXCAVATION TO BEDROCK (ABOUT 18.5 FEET BELOW GRADE SURFACE)

NOTES:

1. THE BASE MAP IS REFERENCED FROM THE SURVEY PREPARED BY LANGAN DATED OCTOBER 10, 2017.
2. PROPOSED DEVELOPMENT DEPTH IS ABOUT 20 FEET BELOW CELLAR GRADE IN THE WESTERN PART OF THE SITE AND ABOUT 30 FEET BELOW FIRST FLOOR GRADE IN THE EASTERN PART OF THE SITE.
3. THE MAXIMUM ELEVATION AT WHICH SOIL EXCEEDING THE UNRESTRICTED USE SOIL CLEANUP OBJECTIVES IS PRESENT IS EL -4.5.
4. EL = ELEVATION
5. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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.

40 0 10 25 40
SCALE IN FEET

LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
414 GERARD AVENUE
BLOCK No. 2350, LOT No. 1
BRONX NEW YORK

Figure Title
TRACK 1 CLEANUP PLAN

Project No.	Figure No.
170488401	2
Date: 10/17/2017	
Scale: 1" = 40'	
Drawn By: VZ / Checked By: MLR	

Filename: \\langan.com\data\NYC\data4\170488401\Project Data\CAD\01\SheetFiles\Environmental\RAWP\RAWP DD Figure 2 - Track 1 Cleanup Plan - FOR DD.dwg Date: 11/9/2018 Time: 15:00 User: jleung Style Table: Langan.stb Layout: Track 1 Cleanup Plan