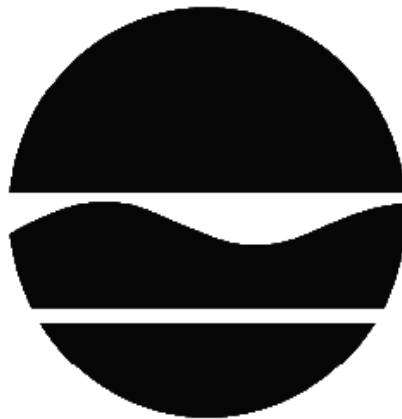


# DECISION DOCUMENT

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Former East Coast Industrial Uniform  
Brownfield Cleanup Program  
Brooklyn, Kings County  
Site No. C224156  
April 2013



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

# DECLARATION STATEMENT - DECISION DOCUMENT

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Former East Coast Industrial Uniform  
Brownfield Cleanup Program  
Brooklyn, Kings County  
Site No. C224156  
April 2013

## **Statement of Purpose and Basis**

This document presents the remedy for the Former East Coast Industrial Uniform 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 East Coast Industrial Uniform 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. Green Remediation**

Green remediation principals and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

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

### **2. 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 buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (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 the soil of sufficient quality to maintain a vegetation layer. Any fill

material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

### **3. Vapor Mitigation**

Any 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 soil and/or groundwater.

### **4. In-Situ Chemical Oxidation or Reduction**

In-situ chemical oxidation (ISCO) will be implemented to treat VOCs in groundwater. A chemical oxidant will be injected into the subsurface to destroy the contaminants in an approximately 50 by 100 foot area located in the middle portion of the site where elevated concentrations of chlorinated volatile organic compounds were detected in the groundwater via injection wells screened eight feet below the water table. The byproducts of the ISCO process are non-toxic.

### **5. Institutional Control**

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 County DOH; and
- requires 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 5 above.
- Engineering Controls: The cover system discussed in Paragraph 2 and the vapor mitigation 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 the remedy; and
- a schedule of monitoring and frequency of submittals to the Department.

### **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.

April 8, 2013



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Date

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Robert J. Cozzy, Director  
Remedial Bureau B

# DECISION DOCUMENT

Former East Coast Industrial Uniform  
Brooklyn, Kings County  
Site No. C224156  
March 2013

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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:

Marcy Library  
617 DeKalb Ave. (at Nostrand Ave.)  
Brooklyn, NY 11216  
Phone: 718-935-0032

### **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 Former East Coast Industrial Uniform Site is located in the City of New York, Borough of Brooklyn (Kings County) at 39 Skillman Street. It is identified as Block 1886, Lot 10 on the NYC tax map.

**Site Features:** The site is currently vacant and was formerly developed with three attached buildings and a parking area. The parking area was located on the southern end of the lot and consisted of an asphalt cover. A one-story brick building was located north of the parking area. A second one-story brick building was located north of the first. The northern-most building was a vacant two-story brick building which was used for sorting, ironing, folding and storage of clothing/uniforms, etc.

**Current Zoning/Uses:** The site has historically been zoned for light industrial/commercial applications. In 2001, the area was rezoned as a Special Mixed Use district (MX4) which added an R-6A residential zoning to the area. The surrounding land use includes 3 new multi-family residential buildings to the east, four new multi-family residential buildings and a vacant commercial building to the west, older multi-family walk up style buildings to the south and a community/office building to the north.

**Past Use of the Site:** The Site was developed prior to 1887 with a Brooklyn Union Gas “Gasometer” (gas holder) in the northern third of the property and multiple residential homes and stores on the southern portion. The holder was operated solely as a gas distribution holder; no gas production facilities were present. By 1935, the holder was removed and the northern section was vacant until approximately 1941 when it was a parking lot and then a furniture/framing company. From 1974 to 2008, East Coast Industrial Uniform, an industrial dry-cleaning operation, was operating on the site. There are several concrete lined trenches cut through the southeast end of the building which were likely used to contain wash water from numerous washing machines prior to discharge through the small aboveground oil water separator located in the southeast corner and finally to public sewer. An abandoned-in-place underground storage tank is located near the roll-up gate entrance to the building. The underground storage tank is believed to be the 3,000-gallon No. 2 fuel oil tank identified on the NYSDEC PBS database.

**Site Geology and Hydrogeology:** Subsurface soils at the Site consist of brown sand with some gravel to approximately 15 feet below grade. Native fine brown sand with a trace amount of silt is present immediately below this layer. The water table is approximately 20 feet below grade and groundwater flows generally to the west-northwest.

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
- 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:

TETRACHLOROETHYLENE (PCE)	LEAD
TRICHLOROETHENE (TCE)	MERCURY
ETHENE, 1,2, Cis-Dichloro	1,2,4-TRIMETHYLBENZENE
BENZENE	NAPHTHALENE
XYLENE (MIXED)	

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

- groundwater
- soil

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

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

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

#### **IRM Soil Excavation and Tank Removal**

A 3,000 gallon fuel oil underground storage tank was removed as part of the IRM. Contaminant source areas, including all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8, were excavated and transported off-site for disposal. Soil with certain



contaminants exceeding the groundwater protection SCOs was also removed. Clean fill meeting the requirements of Restricted Residential SCOs in 6 NYCRR Part 375-6.7(d) was brought in to complete the backfilling of the excavation and to establish the designed grades at the site.

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

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

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

Based on the results of the Remedial Investigation, known contaminants including volatile organic compounds (VOCs) consisting primarily of petroleum compounds and chlorinated solvents, semi-volatile organic compounds (SVOCs) and metals are presented in the subsurface. These contaminants are impacting soil, groundwater and soil vapor.

Groundwater - Petroleum VOCs and chlorinated VOCs were reported in groundwater above TOGS standards. For example, 1,2,4-trimethylbenzene was detected at a maximum concentration of 290 ppb (standard is 5 ppb). Tetrachloroethene (PCE) was detected at a maximum concentration of 540 ppb (standard is 5 ppb). Trichloroethene (TCE) was detected at a maximum concentration of 53 ppb (standard is 5 ppb).

Soil - Petroleum VOCs were detected in soil above their corresponding NYSDEC Part 375.6 unrestricted soil cleanup objectives (UUSCOs). For example, 1,2,4-trimethylbenzene was detected at a maximum concentration of 16 ppm (UUSCO is 3.6 ppm). Naphthalene was detected at a maximum concentration of 18 ppm (UUSCO is 12 ppm).

Soil Vapor – Elevated concentrations of several chlorinated VOCs were detected on the site. For example, PCE was detected at a maximum concentration of 3,510 ug/m<sup>3</sup> and TCE was detected at 687 ug/m<sup>3</sup>.

Significant Threat: NYSDEC and NYSDOH determined that this site does not pose a significant threat to human health or the environment.

### **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*.

Contact with contaminated soil or groundwater is not likely unless people dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in groundwater from an off-site source may move

into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect 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 people to inhale contaminants in indoor air due to soil vapor intrusion in any future on-site building development and occupancy. On-site contamination is not contributing to off-site vapor intrusion exposures.

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

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

The remedial action objectives for this site are:

### **Groundwater**

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

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

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

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.

### **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 Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Composite Cover System and In-Situ Groundwater Treatment remedy.

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

### **1. Green Remediation**

Green remediation principals and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
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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 prevent the migration of vapors into the building from soil and/or groundwater.

### **4. In-Situ Chemical Oxidation or Reduction**

In-situ chemical oxidation (ISCO) will be implemented to treat VOCs in groundwater. A chemical oxidant will be injected into the subsurface to destroy the contaminants in an approximately 50 by 100 foot area located in the middle portion of the site where elevated concentrations of chlorinated volatile organic compounds were detected in the groundwater via injection wells screened eight feet below the water table. The byproducts of the ISCO process are non-toxic.

## **5. Institutional Control**

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 County DOH; and
- requires 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 5 above.
- Engineering Controls: The cover system discussed in Paragraph 2 and the vapor mitigation 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 the remedy; and
- a schedule of monitoring and frequency of submittals to the Department.



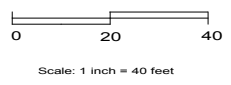
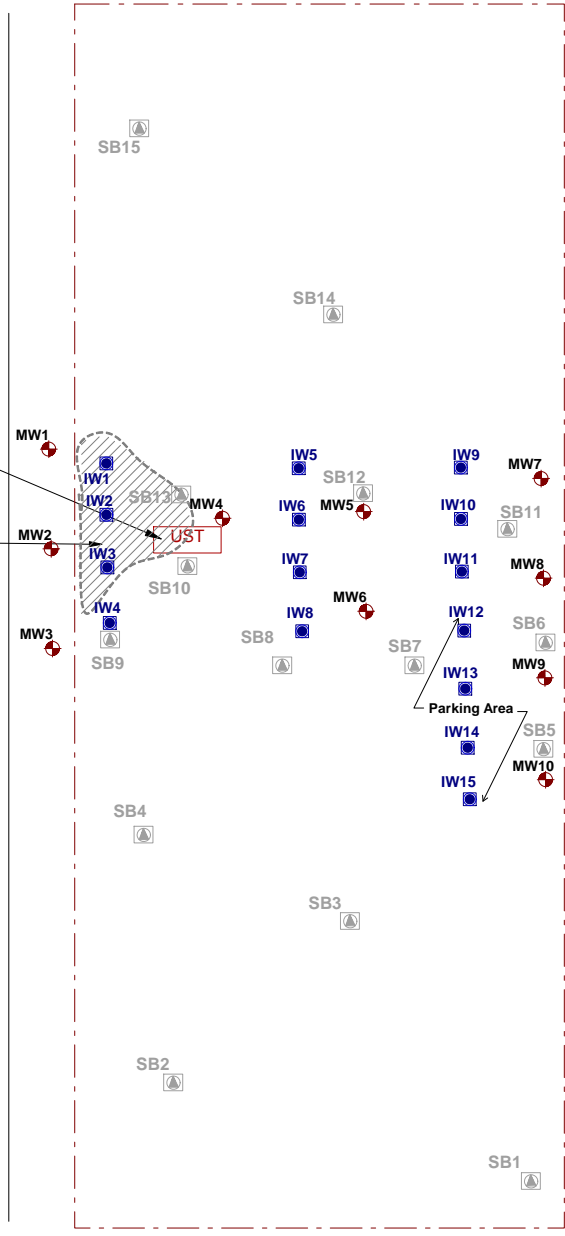
**EBC**  
 ENVIRONMENTAL BUSINESS CONSULTANTS  
 1808 MIDDLE COUNTRY ROAD, RIDGE, NY 11961  
 Phone: 631.504.6000  
 Fax: 631.924.2780




6-16 BOX STREET AND 1121-1137 MANHATTAN AVENUE  
 BROOKLYN, NY 11222  
**Figure 1** PROJECT SITE AND  
 ADJACENT PROPERTIES



# Skillman Street

Former UST  
PCE Impacted  
Soil Area (REMOVED)



- Property Line
- SBx  RI Soil Boring Location
- MWx  Monitoring Well Location
- IWx  Injection Well Location