# **DECISION DOCUMENT**

18-46 Decatur Street
Brownfield Cleanup Program
Ridgewood, Queens County
Site No. C241194
April 2018



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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

18-46 Decatur Street
Brownfield Cleanup Program
Ridgewood, Queens County
Site No. C241194
April 2018

## **Statement of Purpose and Basis**

This document presents the remedy for the 18-46 Decatur Street 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 18-46 Decatur Street 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. Excavation

Excavation and off-site disposal of all on-site soils which exceed commercial soil cleanup objectives in the upper 15 feet, as well as all soils, regardless of depth, which exceed the Groundwater Protection SCO for tetrachloroethylene, as defined by 6 NYCRR Part 375-6.8. If a Track 2 commercial cleanup is achieved, a Cover System will not be a required element of the remedy.

The existing slab in the two "hot spot" areas, as indicated on Figure 2, will be demolished and materials that cannot be beneficially reused on-site will be taken off-site for proper disposal in order to implement the remedy.

Approximately 20 cubic yards of contaminated soil/concrete will be removed from the site.

#### 3. Backfill

Clean fill meeting the requirements of 6 NYCRR 375-6.7(d) will be brought in, as necessary, to replace the excavated soil or complete backfilling of the excavation and establish design grades at the Site.

# 4. <u>Vapor Mitigation</u>

Any on-site buildings will be required to have a sub-slab depressurization system (SSDS), or a similar engineered system, to prevent the migration of vapors into the building from soil and/or groundwater.

#### 5. In-Situ Groundwater Treatment

In-situ chemical oxidation or reduction will be implemented to treat volatile contaminants in groundwater. A chemical oxidant or a chemical reducing agent will be introduced into the subsurface to destroy the contaminants across the site where PCE and related compounds were elevated in the groundwater. The method of injection will be determined during the remedial design.

Prior to implementation of this technology, laboratory studies will be conducted, as necessary, to more clearly define design parameters.

#### 6. 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 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.

## 7. 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:

<u>Institutional Controls</u>: The Environmental Easement discussed in Paragraph 6 above.

<u>Engineering Controls</u>: The SSDS discussed in Paragraph 4, the contingent Site Cover discussed in Paragraph 8, and the contingent Soil Vapor Extraction System (SVE) discussed in Paragraph 9.

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 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:
- o monitoring of groundwater to assess the performance and effectiveness of the remedy;
- o a schedule of monitoring and frequency of submittals to the Department.

## Contingent Track 4

In the event that a Track 2 restricted use is not achieved, the following contingent remedial

elements will also be required and the remedy will achieve a Track 4 restricted commercial cleanup.

## 8. <u>Cover System</u>

A building foundation/slab currently exists across the Site and will be maintained to allow for commercial use of the Site. Any site redevelopment will maintain the existing cover. The site cover may include paved surface parking areas, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable SCOs for commercial use. 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). Should a building foundation or building slab be removed in the future, a cover system consistent with that described in this Paragraph will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable soil cleanup objectives (SCOs). If a Track 2 commercial cleanup is achieved, a Cover System will not be a required element of the remedy.

## 9. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere. If the SVE system is constructed, it must be demonstrated that the system can provide negative pressure throughout the building slab similar to the SSDS discussed in Paragraph 4 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.

4/16/2018	Ad W Bh
Date	Gerard Burke, Director
	Remedial Bureau B

# **DECISION DOCUMENT**

18-46 Decatur Street Ridgewood, Queens County Site No. C241194 April 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, 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 Ridgewood 20-12 Madison Street Ridgewood, NY 11385 Phone: (718) 821-4770

Queens Community Board #5 61-23 Myrtle Avenue Glendale, NY 11385 Phone: (718) 366-1834

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## **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 <a href="http://www.dec.ny.gov/chemical/61092.html">http://www.dec.ny.gov/chemical/61092.html</a>

# **SECTION 3: SITE DESCRIPTION AND HISTORY**

Location: The site is located in Ridgewood, Queens, and is identified as Block 3579, Lot 45. The site is bounded to the north by a multi-family walkup building (18-48 Decatur Street); to the south by a two-family building (18-40 Decatur Street); to the east by the LIRR railroad tracks and Evergreen Park; and to the west by Decatur Street, beyond which is a two-family building (18-39 Decatur Street) and an industrial/ manufacturing building (18-37 Decatur Street). The site is approximately 0.11 acres in size. Public school PS 68 Cambridge is located approximately 350 feet south of the site.

<u>Site Features</u>: The site is developed with a two-story commercial use building. It is used as a warehouse for building materials with offices on the second floor. There is no basement. The building floor slab consists of approximately 6 inches of concrete. The existing building fully occupies the site, with no parking or landscaped areas.

<u>Current Zoning and Land Use</u>: The site is currently zoned M1-4D. The adjacent properties are residential, commercial, industrial and transportation (railroad) facilities.

<u>Past Use of the Site</u>: The site has been used for industrial purposes since 1953 including a tuxedo supply company which performed on-site dry-cleaning from 1991 to 2015. Prior to 1953, the Site was developed with wagon and auto storage sheds.

<u>Geology and Hydrogeology</u>: The site is covered by an approximately six-inch thick concrete slab underlain by approximately two feet of light brown to dark brown medium sands and fill material, followed by glacial till, including light and dark brown fine to medium sand with cobbles. The approximate depth to bedrock is 300 feet from grade surface.

Groundwater is present at a depth of approximately 67 feet below grade. Groundwater flow direction is generally towards 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 commercial use (which allows for 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 Volunteer(s) does/do not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

The Department will seek to identify any parties (other than the Volunteer) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought, or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

#### **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:

- air
- groundwater
- soil
- soil vapor
- indoor air
- sub-slab vapor

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

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

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

#### **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) trichloroethene (TCE)

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

- groundwater
- soil
- soil vapor intrusion
- indoor air

#### **6.2:** <u>Interim Remedial Measures</u>

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:

Soil and groundwater were analyzed for volatile organic Compounds (VOCs), semi-volatile organic Compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Subslab vapor and indoor air were analyzed for VOCs. Based on the investigations conducted to date, the primary contaminant of concern is tetrachloroethene (PCE).

<u>Soil</u> - PCE was found in surficial and shallow soil, mostly near the former dry cleaning equipment room in the northern corner of the site. PCE was detected in a surface soil sample at a concentration of 55 parts per million (ppm) which exceeds the groundwater protection SCO (1.3 ppm). The maximum concentration detected in shallow soil was 9.5 ppm which exceeds the groundwater protection SCO. TCE was not detected above unrestricted SCOs in any of the soil samples collected. Based upon the interior-only use and storage of the chemicals of concern, soil contamination is not thought to extend off-site.

<u>Groundwater</u> - PCE was also found in groundwater across the site exceeding the groundwater standard (5 parts per billion or ppb), with a maximum concentration of 25 ppb. TCE was not detected above groundwater standards in any of the groundwater samples collected. Groundwater contamination related to the site may extend off-site.

Sub-slab Soil Vapor and Indoor Air - PCE was detected in sub-slab soil vapor at elevated concentrations with a maximum concentration of 401,000 micrograms per cubic meter ( $\hat{A}\mu g/m3$ ) during the May 2016 Phase II Environmental Site Assessment (ESA) and up to 3,440  $\hat{A}\mu g/m3$  during the March/April 2017 Remedial Investigation (RI). Trichloroethylene (TCE), a degradation compound of PCE, was also detected in sub-slab soil vapor at elevated concentrations with a maximum concentration of 597  $\hat{A}\mu g/m3$  during the May 2016 Phase II ESA and up to 4.87  $\hat{A}\mu g/m3$  during the March/April 2017 RI. PCE was detected in indoor air at concentrations up to 23.1  $\hat{A}\mu g/m3$  during the RI. TCE was not detected in the indoor air above the reporting limit of 0.12  $\hat{A}\mu g/m3$ . Based on these results, more information is necessary to assess the potential for off-site soil vapor intrusion.

#### **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 covered with buildings; however, people may contact contaminated soils if they 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 its water from a different source that is not affected by this contamination. Volatile organic compounds in the soil vapor 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. The potential exists for people to inhale contaminants in indoor air due to soil vapor intrusion. Additional investigation is needed to evaluate soil vapor intrusion at off-site structures.

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

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

The remedial action objectives for this site are:

#### **Groundwater**

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

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

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

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

#### Soil

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

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

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

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

#### Soil Vapor

# **RAOs for Public Health Protection**

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

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#### 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 2: Restricted use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Source Removal and Groundwater Treatment 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;

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Approximately 20 cubic yards of contaminated soil/concrete will be removed from the site.

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#### Contingent Track 4

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#### 8. Cover System

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will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable soil cleanup objectives (SCOs). If a Track 2 commercial cleanup is achieved, a Cover System will not be a required element of the remedy.

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