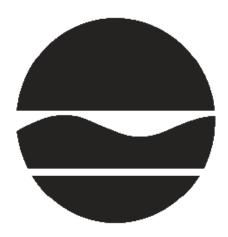
DECISION DOCUMENT

Former Consolidated Freightways Truck Terminal Brownfield Cleanup Program Brooklyn, Kings County Site No. C224191 November 2015



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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Consolidated Freightways Truck Terminal Brownfield Cleanup Program Brooklyn, Kings County Site No. C224191 November 2015

Statement of Purpose and Basis

This document presents the remedy for the Former Consolidated Freightways Truck Terminal 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 Consolidated Freightways Truck Terminal 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

The remediation will include excavation and off-site disposal of contaminant source areas, including but not limited to:

- All existing on-site buildings will be demolished prior to excavation to accommodate remediation and redevelopment;
- petroleum impacted soil in the former fueling area, and anywhere else where it is encountered on-site;
- soil which exceeds the protection of groundwater soil cleanup objective (PGWSCOs) for semi-volatile organic compounds (SVOCs) in areas where those contaminants are present in groundwater above standards; and
- removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Approximately 778 cubic yards of soil will be excavated and disposed off-site. Additional soil will be excavated from beneath the raised terminal platform building, which is currently raised approximately 4 feet above surface grade. Soil from beneath the raised platform which does not exceed the lower of the PGWSCO or restricted residential use SCOs (RRSCOs) may be used to backfill the existing basement area and the excavation areas described above. The excess material (approximately 3,991 cubic yards) will either be disposed off-site, or re-used on-site below the cover system described in remedy element 3.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3.

3. Cover System

A site cover will be required to allow for restricted residential use of the site. The site 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. Prior to development, clean fill meeting the requirements of the 6 NYCRR Part 375-6.7(d) will be brought to raise the entire site to an elevation of two feet above the current grade level.

4. Groundwater Treatment

Limited dewatering will be performed to enable the excavation. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system.

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 NYCDOH;
- 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 above.
 - Engineering Controls: The cover system discussed 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;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- o 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:
 - o a schedule of monitoring and frequency of submittals to the Department;
 - monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

Date

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.

11/24/15

Megz for

Robert Cozzy, Director Remedial Bureau B

DECISION DOCUMENT

Former Consolidated Freightways Truck Terminal Brooklyn, Kings County Site No. C224191 November 2015

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: <u>CITIZEN PARTICIPATION</u>

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:

Brooklyn Public Library - Greenpoint Branch 107 Norman Avenue Brooklyn, NY 11222 Phone:

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 at 11 West Street in Brooklyn, New York. The site is an urban area in the Greenpoint neighborhood of Brooklyn and is denoted on the New York City Tax Maps as Block 2570, Lot 1. The site is bordered on the east by West Street, on the south by Quay Street, on the west by the East River, and on the north by Oak Street and the Greenpoint Marina Site (which is also enrolled in the BCP as Site C224190).

Site Features: The site is 4.88 acres in size. It is currently developed with three buildings: a 47,000 square foot (sf) single story storage building with a two-sided raised platform loading dock, a 3500 sf two story building formerly used for truck maintenance which includes a cellar utilized for the boiler and electrical rooms, and a 1250 sf building formerly used for truck repair/maintenance. It is currently occupied by commercial uses including a lumber and building materials supplier and a commercial space leasing company which rents individual truck parking space and storage space. The remainder of the property is an open paved lot for staging trucks and equipment. There is rip-rap along the western edge of the site to stabilize and protect the shoreline.

Current Zoning and Land Use: The site is zoned R6-R7 (residential) with C2-4 (commercial) overlay which allows some ground floor retail. The current use of the site is commercial. It is subject to New York City Office of Environmental Remediation (OER) "E" designation program due to the presence of underground gasoline storage tanks.

Past Use of the Site: The site was developed prior to 1887 as a shipyard and iron works known as Samuel Sneden & Company and its successor, Continental Iron works. The latter company was contracted to build iron water pipes, boilers, iron ferryboat, steamboats and Ironclad warships for the United State Navy during the Civil War. The company focused on building marine boilers and iron components for gas works after the Civil War. The site was vacated sometime between 1916 and 1942. Between 1942 and 1951, the site began operation as a lumber yard, which was later replaced by a machine shop and welding company. The current building was constructed in 1965. Auto repair shops were identified in the east and west end of the building with a fueling station shown on the north side of the building in 1965. In 1978, Consolidated Freightways replaced Associated Transport and occupied the property until the company filed for bankruptcy in 2002.

Site Geology and Hydrogeology: Subsurface soils at the site include a mixture of fill materials consisting of bricks and other rubble in a silty-soil matrix. The thickness of the fill ranges from 5 to more than 10 feet. Below the fill material is a silty-sand. Groundwater is present under water table conditions at a depth of approximately 5-8 feet below the ground surface and flows southwest. Elevation of the site varies from 1 to 9 feet above the National Geodetic Vertical

Datum. The area topography gradually slopes to the west toward the East 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: <u>Summary of the Remedial Investigation</u>

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 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
- 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: <u>RI Results</u>

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:

barium	chrysene
lead	isopropylbenzene
fluoranthene	n-propylbenzene
benzo(a)anthracene	arsenic
benzo(b)fluoranthene	mercury
benzo(a)pyrene	1,1,1-trichloroethane

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.

There were no IRMs performed at this site during the RI.

6.3: <u>Summary of Environmental Assessment</u>

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:

During the remedial investigation, samples of soil and groundwater were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides and PCBs. Soil vapor samples were analyzed for VOCs. Based on investigations conducted to date, the primary contaminants of concern are petroleum-related contaminants, metals and SVOCs. Contaminants are likely associated with historic use of the site for ship building and foundry operations as well as later use for auto repair and fueling operations.

Soil - The primary contaminants of concern detected in soil are SVOCs and metals. In soil, SVOCs and metals were detected site-wide at concentrations above restricted residential use soil cleanup objectives (RRUSCOs). SVOCs were detected at concentrations exceeding the RRUSCO in а few samples, including: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene detected at a maximum concentration of 63 parts per million (ppm), 54 ppm, 77 ppm and 120 ppm, respectively, compared to the RRUSCO of 1 ppm; and chrysene detected at a maximum concentration of 59 ppm compared to the RRUSCO of 3.9 ppm. Metals were identified above their RRUSCOs within the historic fill layer across the site at depths ranging from surface grade to 7 feet below grade surface. Metals that have been identified in soil include: lead detected as high as 2,320 ppm (compared to the RRUSCO of 400 ppm); arsenic detected as high as 47.6 ppm (RRUSCO is 16 ppm); and mercury detected as high as 4.29 ppm (RRUSCO is 0.81 ppm). The investigation did not identify site related contaminants in off-site soil.

Groundwater - Groundwater was encountered at a depth of approximately 5 to 10 feet below grade. In groundwater, SVOCs were detected at concentrations above groundwater standard across the site. During the remedial investigation, maximum detected benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene and chrysene were 0.32 parts per billion (ppb), 0.29 ppb, 0.47 ppb, 0.18 ppb and 0.29 ppb, respectively. VOCs including N-propylbenzene and isopropylbenzene were detected within the former fueling station at a maximum concentration of 21 parts per billion (ppb) and 14 ppb, respectively, and slightly above the Class GA Groundwater Quality Standards (GWQS) of 5 parts per billion (ppb). The investigation did not identify off-site migration of contaminants in groundwater.

Soil Vapor - Chlorinated VOCs were detected in soil vapor samples site-wide, as well as soil vapor samples collected in three sub-slab from beneath the basement of the 2-story building, mostly at low concentrations. 1,1,1-trichloroethane (TCA) was detected in sub-slab as high as 187 micrograms per cubic meter (ug/m3). Petroleum-related VOCs were detected at low concentrations in on-site soil vapor. Isopropylbenzene was detected in onsite soil gas near the

north property line at a maximum concentration of 1.72 ug/m3. The investigation did not identify off-site migration of contaminants in soil vapor.

6.4: <u>Summary of Human Exposure Pathways</u>

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*.

Direct contact with contaminants in soil is unlikely because the majority of the site is covered with buildings and pavement. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that contains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater and/or soil 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. Sampling indicates that soil vapor intrusion is not a concern for existing on or off-site buildings; however, a soil vapor intrusion evaluation is needed for future on-site buildings.

6.5: <u>Summary of the Remediation Objectives</u>

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

Remove the source of ground or surface water contamination.

<u>Soil</u>

RAOs for Public Health Protection

Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

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

<u>Soil Vapor</u>

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 Excavation and Site Cover 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. Excavation

The remediation will include excavation and off-site disposal of contaminant source areas, including but not limited to:

- All existing on-site buildings will be demolished prior to excavation to accommodate remediation and redevelopment;
- petroleum impacted soil in the former fueling area, and anywhere else where it is encountered on-site;

- soil which exceeds the protection of groundwater soil cleanup objective (PGWSCOs) for semi-volatile organic compounds (SVOCs) in areas where those contaminants are present in groundwater above standards; and
- removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Approximately 778 cubic yards of soil will be excavated and disposed off-site. Additional soil will be excavated from beneath the raised terminal platform building, which is currently raised approximately 4 feet above surface grade. Soil from beneath the raised platform which does not exceed the lower of the PGWSCO or restricted residential use SCOs (RRSCOs) may be used to backfill the existing basement area and the excavation areas described above. The excess material (approximately 3,991 cubic yards) will either be disposed off-site, or re-used on-site below the cover system described in remedy element 3.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3.

3. Cover System

A site cover will be required to allow for restricted residential use of the site. The site 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. Prior to development, clean fill meeting the requirements of the 6 NYCRR Part 375-6.7(d) will be brought to raise the entire site to an elevation of two feet above the current grade level.

4. Groundwater Treatment

Limited dewatering will be performed to enable the excavation. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system.

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 NYCDOH;
- requires compliance with the Department approved Site Management Plan.

6. Site Management Plan

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

- c. 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 above.
 - Engineering Controls: The cover system discussed 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;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- o maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- d. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
 - o a schedule of monitoring and frequency of submittals to the Department;
 - monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

