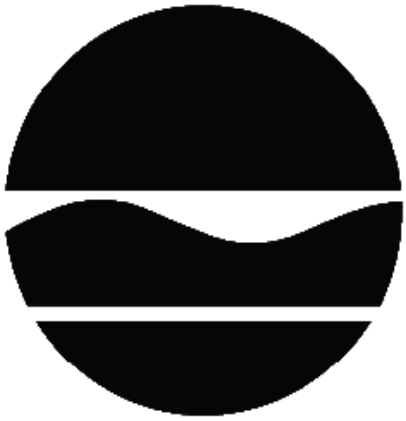
DECISION DOCUMENT

Kent Avenue Station Site
Voluntary Cleanup Program
Brooklyn, Kings County
Site No. V00732
October 2013



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

DECLARATION STATEMENT - DECISION DOCUMENT

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Statement of Purpose and Basis

This document presents the remedy for the Kent Avenue Station Site site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and applicable guidance.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Kent Avenue Station Site site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the 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

All on-site soils above the water table, with the exception of the building footprint, which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. Approximately 10,850 cubic yards of soil will be removed from the site and disposed off-site, in accordance with applicable regulations, including the identification and proper disposal of asbestos containing material. Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to replace the excavated soil and establish the designed grades at the site. Appropriate dust suppression techniques will be employed to prevent the release of asbestos and other particulates into surrounding areas.

3. Underground Storage Tank Removal

In the northern section of the site, an old underground storage tank, used to store fuel oil, will be registered and removed. The surrounding soils will be excavated, as noted in item 2.

4. Site Cover

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).

5. Manufactured Gas Plant Tar Investigation

To properly determine the requirements of the Site Management Plan, an investigation will be conducted to delineate the extent of the MGP tar contamination emanating from National Grid's Nassau Gas Works. The Nassau Gas Works was a manufactured gas plant located directly south of the site.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction 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.

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:

Institutional Controls: the deed restriction listed above.

Engineering Controls: long term groundwater monitoring, site-wide inspections to ensure that use restrictions and the soil cover remain in place, and an excavation plan.

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

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.

October 18, 2013
Date

George Heitzman, Director
Remedial Bureau C

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Kent Avenue Station Site
Brooklyn, Kings County
Site No. V00732
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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 Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." 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:

Community Board 2
350 Jay Street, 8th Floor
Brooklyn, NY 11201
Phone: 718-596-5410

Williamsburg Public Library
240 Division Avenue
Brooklyn, NY 11211
Phone: 718-302-3485

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 a mixed-use area along the Brooklyn waterfront. It is bounded by Kent Avenue to the east, Wallabout Channel to the west, Division Avenue to the north, and the Brooklyn Navy Yard to the south.

Site Features: The site is a currently vacant with no above grade structures. In the subsurface, a large concrete-lined pit is present in the northwest corner of the site and along the edge of the Wallabout Channel. A large concrete slab which is part of a former power plant foundation occupies the center of the site. The slab has been covered with clean fill.

Current zoning/use. The site is zoned for industrial use, but is currently vacant. It is surrounded by commercial buildings and multiple occupancy residences.

Past Use of the Site: The site was previously an electrical generating station and substation from 1906 until the late 1990s. The site was razed from 2007 to 2009. The main sources of contamination were the concrete-lined ash pit storage area and by-products of the electrical generating process which are scattered across the site.

Site Geology and Hydrogeology: The site is underlain by a 5 to 10 foot layer of fill material. Under the fill are intermingled layers of silt and sand down to roughly 100 feet below grade. Beneath the silt and sand is a clay confining unit.

The water table lies roughly 8 feet below the ground surface. Based on the site's proximity to the Wallabout channel, groundwater levels are probably tidally influenced. The far western edge of the site is built out on piles over the bank of the Wallabout Channel.

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, at a minimum, alternatives that restrict the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in DER-10, Technical Guidance for Site Investigation and Remediation were evaluated.

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 Alternative Analysis Report.

SECTION 5: ENFORCEMENT STATUS

The Department and Consolidated Edison of New York entered into a Voluntary Cleanup Agreement on August 15, 2002. The Agreement obligates the responsible party to implement a full remedial program at a number of sites located throughout New York City and Westchester County. The responsible party is subject to legal actions by the state for recovery of all response costs the state has incurred. This site was added to the list of sites covered by that agreement in 2010.

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 data was reported in several reports ("Site Investigation Summary Report" (2007), "Pre-Design Investigation Report" (2010), and "Pre-IRM Investigation Summary Report" (2012)) which are 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

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 Alternative Analysis Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)
- Total Polycyclic Aromatic Hydrocarbons (PAHs), Total
- Asbestos
- Polychlorinated Biphenyls (PCB)

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.

Ash Pit Remediation

From September 2011 to January 2012, roughly 1,100 cubic yards of PCB-contaminated ash and some construction debris was removed from the concrete holding pit in the northwest corner of the property and was sent for off-site disposal as part of an IRM. The ash pit was then backfilled to grade with low-density concrete while stabilizing the bulkhead.

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: The site is impacted by volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, and PCBs, all by-products of the electrical generation and distribution that occurred on site. The contaminants are distributed across the site with the exception of the center section of the site where the footprint of the old building is located, and exceed the soil cleanup objectives (SCOs) for restricted residential use. That section was filled with clean fill material from the basement level to the current existing grade in 2009, when the building was demolished. There is also evidence of asbestos in the shallow subsurface.

The Kent Ave Station site is also immediately adjacent to the former Nassau Manufactured Gas Plant and is likely impacted by that site as well. Investigation at the Nassau site suggests that coal tar and its constituent contaminants, VOCs and SVOCs, have migrated through subsurface soils beyond the limits of the Nassau site and onto this site. This migration has not yet been fully delineated, but appears to be taking place at significant depths, roughly 20 to 40 feet below the ground surface. Groundwater beneath the site is also contaminated with VOCs, SVOCs, and metals. The groundwater contamination at the site seems to be steadily decreasing with no VOCs detected since 2008. Fluoranthene is the SVOC with the highest concentration at 0.34 parts per billion. This contamination is only found in one well, in the southwest corner of the 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.*

The site is completely fenced, which restricts public access. Persons who dig below the ground surface may come into contact with contaminants in the subsurface soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion in any future on-site building development and occupancy.

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.
- 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.
- Prevent inhalation of or exposure to airborne particulates from contaminated 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.

The selected remedy is referred to as the Excavation of Soils Exceeding Restricted Residential Standards 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.

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