

DECISION DOCUMENT

Former Peninsula Hospital Site
Brownfield Cleanup Program
Far Rockaway, Queens County
Site No. C241200
March 2021



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Peninsula Hospital Site
Brownfield Cleanup Program
Far Rockaway, Queens County
Site No. C241200
March 2021

Statement of Purpose and Basis

This document presents the remedy for the Former Peninsula Hospital Site 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 Peninsula Hospital Site 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at

a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all soils that exceed the protection of groundwater soil cleanup objectives (for contaminants present in groundwater) to a depth of approximately 8 feet below grade, as defined by 6 NYCRR Part 375-6.8(b) to achieve a Track 4 restricted residential remedy. The areas targeted for soil removal are depicted in Figure 2. Approximately 450 cubic yards of contaminated soil will be removed from the site. On-site soil which does not exceed the excavation criteria may be used to backfill the excavation to establish the designed grades at the site below the cover system described in remedy element 3. Clean fill meeting the requirements of Part 375-6.7(d) will be brought in to replace excavated soil and establish the designed grades at the site.

3. Site Cover

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

4. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

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

5. 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 3 above.

This plan includes, but may not be limited to:

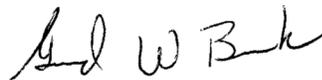
- a) An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
 - a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
 - 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.

March 4, 2021

Date



Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Former Peninsula Hospital Site
Far Rockaway, Queens County
Site No. C241200
March 2021

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:

DECInfo Locator - Web Application
<https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C241200>

The Archives at Queens Library
89-11 Merrick Boulevard
Jamaica, NY 11432
Phone: 718-990-0700

Queens Community Board #14
1931 Mott Avenue

Far Rockaway, NY 11691
Phone: (718) 471-7300

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 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 Peninsula Hospital Site is identified on the New York City Tax Map as Borough of Queens, Block 15843, Lot 1 with an address of 51-15 Beach Channel Drive. The site is located in an urban area of Far Rockaway. The site is bounded by Beach Channel Drive to the north, Beach 53rd Street to the west, a nursing home to the northeast, Beach 50th Street to the east, and Rockaway Beach Boulevard to the south.

Site Features:

The site consist of approximately 8.76 acres. The site previously contained a vacant building formerly used as the Peninsula Hospital, and an adjoining paved parking lot to the southeast of the hospital building. The building was demolished in 2018. Since that time, the site has remained vacant. The proposed site redevelopment will include ten multistory mixed-use buildings, parking areas, landscaped public open spaces, and a public plaza.

Zoning and Land Use:

The site is currently inactive and is zoned R5 (residential) with a C1-2 and C8-1 (commercial) overlay. The surrounding parcels are used for a combination of commercial, light industrial, and transportation uses.

Past Use of the Site:

The site was formerly developed with a large building between 1957 and 1962 that was operated as the Peninsula Hospital until closing in 2012. Prior to the hospital use, the site was undeveloped except for the southwestern corner, which was occupied by a small hotel (from prior to 1912 until sometime before 1933), several residences, and three small stores (by 1951).

Geology and Hydrogeology:

The site is approximately 5 to 10 feet above mean sea level (MSL) and its surface is generally flat. The stratigraphy of the site, from the surface down, consists up to 5 feet of urban fill consisting of brown to gray fine to coarse sand with trace quantities of brick, concrete, and/or gravel fragments and occasional asphalt fragments underlain by native soil generally consisting

of fine to medium-grained light brown to gray sand with intervals of gravel and/or silt. Organic materials from former marsh deposits were noted in the deeper portions of soil borings. Depth to groundwater beneath the site is generally between 4 and 8 feet below grade and the groundwater flow direction is generally to the north.

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 that restrict 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 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 under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does 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

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 contaminants of concern identified at this site is/are:

lead	naphthalene
mercury	trichloroethene (TCE)
benzo(a)pyrene	tetrachloroethene (PCE)
pyrene	

The contaminants 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: 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), pesticides, and per- and polyfluoroalkyl substances (PFAS). Soil vapor was analyzed for VOCs. The primary contaminants of concern at the site include metals, SVOCs and VOCs. Previous environmental investigation in the area revealed concentrations of metals, SVOCs, and VOCs exceeding Standards, Criteria, and Guidance values in the soil and/or groundwater.

Soil:

Based upon investigations to date, surface and sub-surface soils are contaminated with metals, SVOCs and VOCs. Data results from soils sampling reported a number of metals, and SVOCs (polycyclic aromatic hydrocarbons, PAHs). The PAHs and most metals contamination in soils is likely related to the presence of historic fill. Maximum detections in comparison to applicable protection of groundwater or restricted-residential use soil cleanup objectives (PGSCO/RRSCO) are as follows: lead at 1,520 parts per million (ppm) vs. RRSCO of 400 ppm, mercury at 0.992 ppm vs. RRSCO of 0.81 ppm, benzo(a)pyrene at 120 ppm vs. PGSCO of 22 ppm, pyrene at 200 ppm vs. RRSCO of 100 ppm, and naphthalene at 130 ppm vs. RRSCO of 100 ppm.

PFAS were detected in seven of eight soil samples analyzed for the compounds, with both perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) detected below the current guidance values for restricted-residential and/or protection of groundwater use of 33 parts per billion (ppb) and 44 ppb, and 1.1 ppb and 3.7 ppb, respectively.

Data does not indicate any off-site impacts in soil related to this site.

Groundwater:

Groundwater sampling found SVOCs (PAHs) contamination above Class GA groundwater standards. Maximum detections vs. standards is as follows: Benzo(a)pyrene at 0.94 ppb vs non-detect.

PFOA and PFOS were reported at concentrations of up to 216 and 108 parts per trillion (ppt), respectively, exceeding the Maximum Contaminant Level (drinking water standard) of 10 ppt for each. Based on the soil data, there is no apparent on-site source for PFAS in site groundwater. 1,4-dioxane was not detected.

Data does not indicate any off-site impacts in groundwater-related to this site.

Soil Vapor:

VOCs were detected in soil vapor during the remedial investigation. The maximum concentrations of tetrachloroethene, trichloroethene and carbon tetrachloride in soil vapor were

detected in mostly in the central portion of the site at the respective concentrations of 583 micrograms per cubic meter (ug/m³), 16 ug/m³ and 16.5 ug/m³, respectively. Data does not indicate any off-site impacts in soil vapor related to this site.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

The site is currently vacant and fenced; therefore people are not expected to come in contact with any site related contamination in the 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 soil vapor (air spaces within the soil) may move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future onsite redevelopment and occupancy. Environmental sampling indicates soil vapor intrusion is not a concern for offsite buildings.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- 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.

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 Soil 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all soils that exceed the protection of groundwater soil cleanup objectives (for contaminants present in groundwater) to a depth of approximately 8 feet below grade, as defined by 6 NYCRR Part 375-6.8(b) to achieve a Track 4 restricted residential remedy. The areas targeted for soil removal are depicted in Figure 2. Approximately 450 cubic yards of contaminated soil will be removed from the site. On-site soil which does not exceed the excavation criteria may be used to backfill the excavation to establish the designed grades at the site below the cover system described in remedy element 3. Clean fill meeting the requirements of Part 375-6.7(d) will be brought in to replace excavated soil and establish the designed grades at the site.

3. Site Cover

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

4. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

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

5. 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 4 above.

Engineering Controls: The Cover System discussed in Paragraph 3 above.

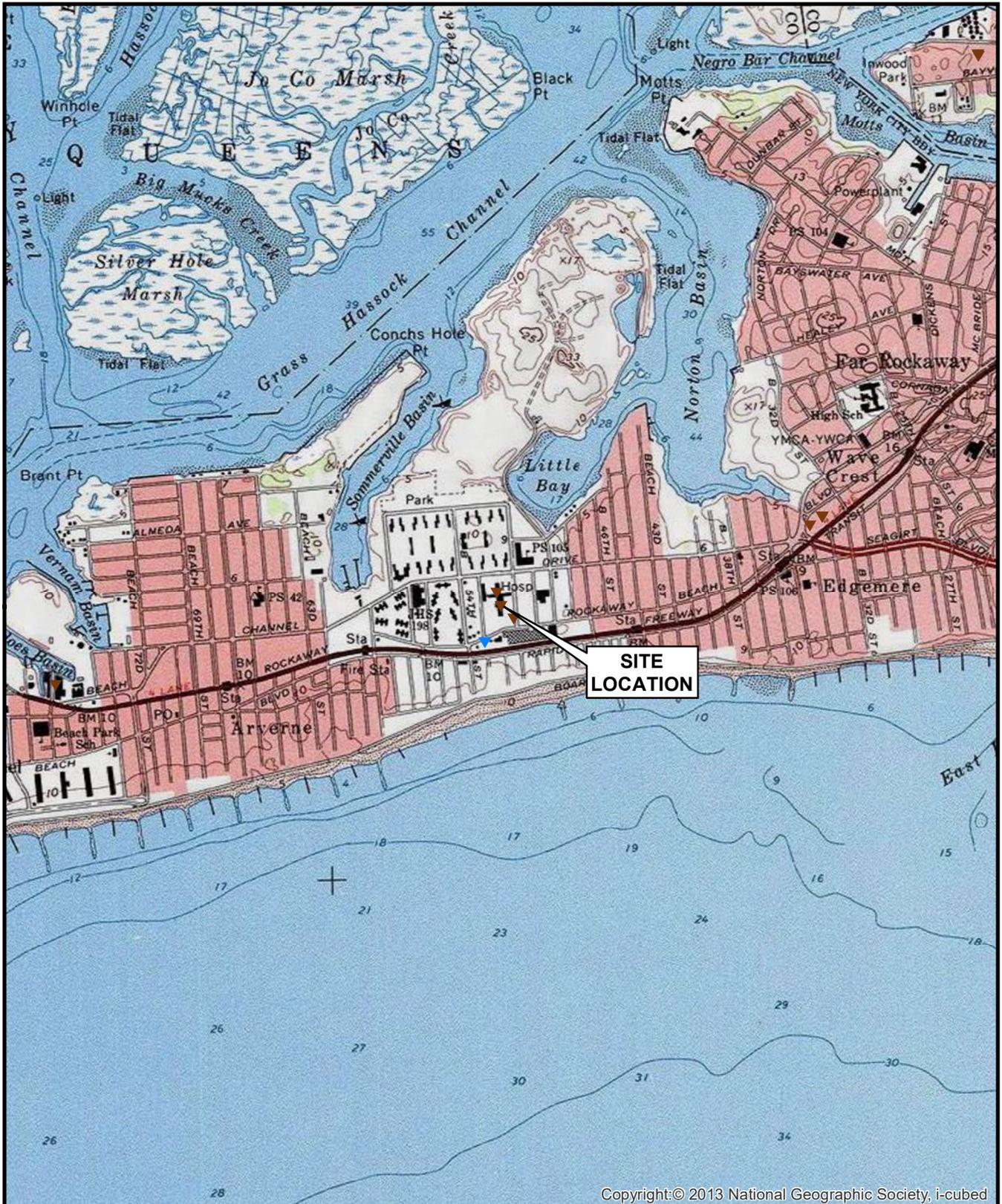
This plan includes, but may not be limited to:

a) 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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- 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.



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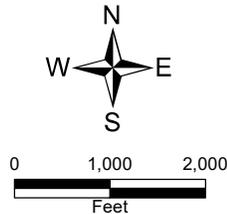


Figure 1
 Site Location Map
 Former Peninsula Hospital
 Far Rockaway, Queens County
 Site No. C241200

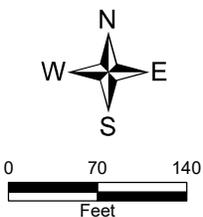


Figure 2
 Conceptual Remedy
 Former Peninsula Hospital
 Far Rockaway, Queens County
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Legend

-  Excavation
-  Property Line
-  Site Cover