DECISION DOCUMENT

365 Bond Street
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224174
March 2015

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

DECLARATION STATEMENT - DECISION DOCUMENT

365 Bond Street
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224174
March 2015

Statement of Purpose and Basis

This document presents the remedy for the 365 Bond 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 365 Bond Street site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the above referenced site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternatives analysis (AA). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore No Further Action is the selected remedy. The remedy may include continued operation of a remedial system if one was installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site.

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 31, 2015

Date

Robert Cozzy, Director
Remedial Bureau B

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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 resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternative analysis (AA). The IRM undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment. The IRM conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the selected remedy. A No Further Action remedy may include continued operation of any remedial system installed during the IRM and the implementation of any prescribed controls that have been identified as being part of the remedy for the site. This DD identifies the IRM conducted and discusses the basis for No Further Action.

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:

Brooklyn Public Library
Attn: Mr. John Leighton
Carroll Gardens Branch
396 Clinton Street
Brooklyn, NY 11231
Phone: (718) 596-6972

Brooklyn Community Board 6
Attn: Mr. Craig Hammerman
250 Baltic Street
Brooklyn, NY 11201-6401
Phone: (718) 643-3027

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 365 Bond Street, Brooklyn, Kings County. The site is south of the intersection of Bond Street and First Street. It is bounded to the northeast by First Street, to the southeast by the Gowanus Canal, to the southwest by Second Street and to the northwest by Bond Street.

Site Features: The site is approximately 2 acres in size. The former vacant lot is currently being re-developed with a 12-story mixed use commercial and residential building.

Current Zoning and Land Use(s): The site is zoned as M1-4/R7-2, a Special Mixed Use District comprised of light industrial, commercial and community facility (residential) uses. The site is bounded to the north by 1st Street across which is located a BCP site, to the east by the Gowanus Canal, to the south by 2nd Street across which are located three-story residential buildings and one- and two-story commercial facilities, and to the west by Bond Street across which are located three-story mixed-use commercial and residential buildings.

Past Use of the Site: Past uses of the site include oil terminal (1886 through 1939); a building materials warehouse (1886 through 1915); a lumber company (1939); a paper products warehouse (1950); an electric wire and cable company (1969); and a warehouse (1977 through 1986). Other recorded uses of the site include an automobile storage and repair facility, and a dry cleaning facility. The previous owner performed the Phase I and the Phase II Environmental Site

Assessments in 2004.

Site Geology and Hydrogeology: The site is underlain by an approximately 5.5- to 13-foot thick layer of miscellaneous fill material that is underlain by a 5- to 8-foot thick continuous clay confining layer. Groundwater is approximately 2.5 to 10 feet below ground surface (bgs). Due to the site's proximity to the Canal, groundwater flow is tidally influenced but generally flows to east/northeast. The clay confining unit is located approximately 9 feet to 10 feet bgs and separates the shallow aquifer from the lower groundwater unit.

Site location maps are attached as Figure 1A and 1B.

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, an alternative that restricts 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 investigation 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 Remedial Investigation (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 contaminant(s) of concern identified at this site is/are:

BENZO(A)ANTHRACENE	XYLENE (MIXED)
BENZO(A)PYRENE	TRICHLOROETHENE (TCE)
BENZO(B)FLUORANTHENE	TETRACHLOROETHYLENE (PCE)
ARSENIC	BENZENE
LEAD	ISOPROPYLBENZENE
MERCURY	N-PROPYLBENZENE
BARIUM	PHENOL

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

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.

An IRM has been completed at this site based on conditions observed during the RI. The Department determined this IRM addressed the on-site contamination so no further remedial action would be necessary. The components of this IRM are as follows:

IRM (Soil Excavation/Soil Cover/Sub-slab Depressurization System)

The IRM that was implemented at this site included:

- Excavation and off-site disposal of six (6) contaminated soil source areas. Remaining soil contamination is described in Section 6.3 below.
- Removal and off-site disposal of seven (7) small underground storage tanks and the associated contaminated soils.
- Installation of a cover system consisting of structures such as buildings, pavement, sidewalks, or a two foot soil cover. Where the soil cover was required it consists of a minimum 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 was placed over a demarcation layer.
- Installation of a passive sub-slab depressurization system (SSDS). During Site Management an evaluation will be performed and, based on this evaluation, the Department will determine if the SSDS will need to be converted to an active system; see Section 7, below.

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.

Soil and groundwater were analyzed for VOCs, SVOCs, metals, and PCB/pesticides. Based upon investigations conducted to date the primary contaminants of concern are benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, arsenic, lead, barium, mercury, xylene, trichloroethene (TCE), tetrachloroethylene (PCE), benzene, n-propylbenzene, isopropyl benzene, and phenol.

Pre-IRM:

Soil - benzo(a)pyrene (1.13 – 53.2 parts per million (ppm)), benzo(a)anthracene (4.4 – 59 ppm), benzo(b)fluoranthene (12 – 41.4 ppm), arsenic (16.2 – 42.9 ppm), lead (1,450 – 4,380 ppm), barium (441 – 1300 ppm), mercury (2.2 - 10.9 ppm) were found in shallow (1’ to 3’ bgs) and

intermediate soils (4' to 8' bgs) greatly exceeding restricted residential soil cleanup objectives (SCOs). The soil concentrations of TCE, PCE, benzene, phenol and xylene do not exceed SCOs.

Groundwater – Groundwater contamination is nominal and will improve upon the removal of contaminated soil. Groundwater quality standards are exceeded as follows: benzene (9.2 parts per billion (ppb)), isopropyl benzene (8.8 - 14.1 ppb), n-propylbenzene (5.5 - 12 ppb), barium (1,090 – 1520 ppb), and phenol (3 ppb).

Soil Vapor - Elevated total xylene (61 - 3,310 micrograms per cubic meter (µg/m³)) soil vapor results were found throughout the site. Elevated TCE (530 µg/m³), and PCE (2,300 µg/m³) soil vapor results were identified near the center of the site, but no other significant levels were found. Indoor air samples were not collected.

Post-IRM:

Soil – All soil source areas were removed, and groundwater protection SCOs were achieved for contaminants that exceeded groundwater standards. The following compounds exceeding restricted residential SCOs were recorded from the 145 post-excavation samples:

Seven sample results for benzo(a)pyrene (1.18 – 10.9 at depths ranging from 4' to 7' bgs); seven sample results for benzo(a)anthracene (1.24 – 10.2 ppm at depths ranging from 4' to 7' bgs); seven sample results for benzo(b)fluoranthene (1.02 – 12.4 ppm at depths ranging from 4' to 7' bgs); six sample results for arsenic (16.8 – 27.1 ppm at depths ranging from 7' to 12' bgs); two sample results for lead (672 – 2480 ppm at depths ranging from 5' to 9' bgs); one sample result for barium (408 ppm at 9' bgs); and four sample results for mercury (1.1 - 10.3 ppm at depths ranging from 5' to 6' bgs).

No post-IRM groundwater samples were taken.

An evaluation of the passive sub-slab depressurization system (SSDS) will be undertaken to determine if active operation is necessary, after the on-site structure is completed.

Based on the available data, it is not anticipated that site related contamination has migrated off-site in any environmental media.

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*.

People are not drinking contaminated groundwater because the area is served by a public water supply that obtains its water from a different source. People who enter the site could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil. 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. Inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition because there is no on-site building. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. In addition, sampling indicates soil vapor intrusion is not a concern for off-site 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.

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

Based on the results of the investigations at the site, and the IRM that has been performed, the Department has selected No Further Action as the remedy for the site. This No Further Action

remedy includes the implementation of the ICs/ECs described below. The Department believes that taking in account the actions taken by the IRM, this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the selected remedy are as follows:

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

2. 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 1 above.

Engineering Controls: The site cover and the sub-slab depressurization systems completed as part of the Interim Remedial Measure.

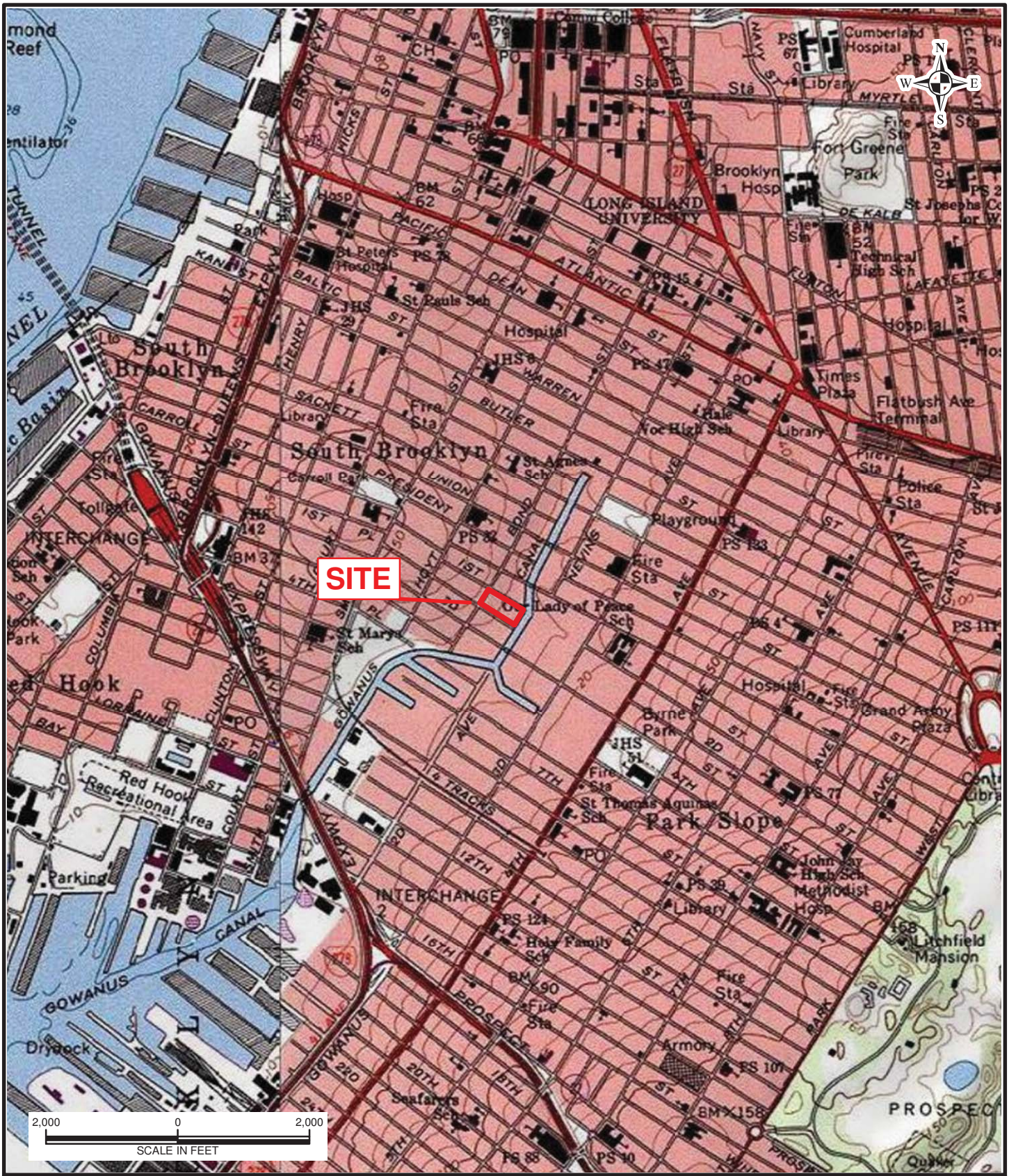
This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- 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 future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion (building currently being constructed has a passive SSDS installed as a part of the IRM; the Volunteer will perform an evaluation of this SSDS and based on this evaluation, the Department, in consultation with

NYSDOH, will determine if the system will need to be converted to an active system or if other appropriate actions are needed);
- 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 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 future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan International LLC
Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project

PROPOSED BOND STREET DEVELOPMENT

BLOCK No. 458, LOT No. 1

BROOKLYN

KINGS COUNTY NEW YORK

Drawing Title

SITE LOCATION MAP

Project No. 100287503	Figure 1A
Date 10/19/2012	
Scale 1"=2000'	
Drawn By amf	
Last Revised 9/9/2014	

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-09 - 365 RAWP\Figure 1 - Site Location Plan.mxd

Google earth

feet 800
meters 200

FIGURE 1B