# **DECISION DOCUMENT**

Former Dutch Masters Paint and Varnish Co.
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224262
October 2020



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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

Former Dutch Masters Paint and Varnish Co.
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224262
October 2020

# **Statement of Purpose and Basis**

This document presents the remedy for the Former Dutch Masters Paint and Varnish Co. 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 Dutch Masters Paint and Varnish Co. 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 on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately 21,000 cubic yards of contaminated soil will be removed from the site. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

#### 3. Backfill

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.

#### 4. Groundwater Extraction

Groundwater extraction will be implemented facilitate excavation of contaminated soil. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to cover the areal and vertical extent of the site. The extraction system will create a depression of the water table so that contaminated groundwater is directed toward the extraction wells within the plume area. Groundwater will be extracted from the subsurface across the site using submersible pumps, pumped to a settling tank and discharged to a New York City Sanitary Sewer for treatment.

# 5. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion, if identified.

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor RAOs, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

In the event that Track 1 unrestricted use is not achieved, including the achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup:

#### **Institutional Controls**

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

# 7. Site Management Plan

A Site Management Plan, which would include 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 6 above. This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use, and/or groundwater and/or surface water use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for the existing on-site buildings should they become occupied before they are demolished and 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 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 5, 2020 | And Wish               |
|-----------------|------------------------|
| Date            | Gerard Burke, Director |
|                 | Remedial Bureau B      |

# **DECISION DOCUMENT**

Former Dutch Masters Paint and Varnish Co. Brooklyn, Kings County Site No. C224262 October 2020

# **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 repository:

**DECInfo Locator - Web Application** https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224262

Brooklyn Public Library- Leonard Branch 81 Devoe St at Leonard St Brooklyn, NY 11211 Phone: 718-486-6006

**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. the public to sign for one more county listservs encourage up or http://www.dec.ny.gov/chemical/61092.html

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

Location: The site is comprised of two parcels designated as block 2279, lots 1 and 9, totaling 0.65 acres, and is located at 29-41 Wythe Avenue and 180 North 14th Street in the Williamsburg neighborhood of Brooklyn, NY.

Site Features: Lot 1 was improved with a 1-2 story industrial building constructed circa 1925. Lot 9 was improved with a 1-story industrial building constructed circa 1950. Both buildings were recently demolished.

Current Zoning and Land Use: The site is currently zoned M1-1 (manufacturing). M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. The site is currently vacant, with concrete covering the entire site. The land use in the immediate vicinity of the site includes an industrial manufacturing building and new development project to the west, a new hotel and retail shops to the south, new construction, a high school and an existing office building to the east, and an industrial/manufacturing property to the north.

Past Use of the Site: A portion of Lot 1 was occupied by a varnish factory beginning sometime prior to 1887. The varnish works expanded to cover the entirety of Lot 1 by 1942. Records show that, by 1951, this lot was occupied by the Dutch Masters Paint and Varnish company until 2007. This lot was also used as a manufacturer of typewriter ribbon, a clothing warehouse, a motorcycle repair shop and art studio.

A portion of Lot 9 was used as a foundry for the manufacture of window weights from 1902 through 1916. By 1942, the property was used as a bed spring manufacturer. Dutch Masters Paint and Varnish took a mortgage on this lot in 1969. Later, the property was used as a warehouse for typewriter ribbons and a clothing warehouse. In 2009, it was rented out as music studios.

Site Geology and Hydrogeology: Subsurface soils at the site consist of historic fill materials to a depth of approximately 8 to 10 feet below the surface, followed by native silty-sand and clay layers. The elevation of the property is approximately 12-13 feet above mean sea level. The area topography gradually slopes to the north toward the East River. Groundwater is 7.5-11.8 feet below grade under water table conditions and flows to the north east toward the East River. The entire site is located within a designated moderate risk flood zone area with a portion of Lot 1 in a high-risk flood area.

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, an alternative which allows for unrestricted use of the site was evaluated.

A comparison of the results of the Remedial Investigation (RI) against unrestricted use standards, criteria and guidance values (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: 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: <a href="http://www.dec.ny.gov/regulations/61794.html">http://www.dec.ny.gov/regulations/61794.html</a>

### 6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

trichloroethene (TCE) benzo(b)fluoranthene benzo(a)anthracene chrysene benzo(a)pyrene indeno(1,2,3-CD)pyrene

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: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides, and emerging contaminants (per and polyfluorinated alkyl substances, or PFAS, and 1,4-dioxane) in groundwater. Soil vapor samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for the site include trichloroethene (TCE), and petroleum related SVOCs.

Soil - TCE was found in shallow soil across the site. The maximum concentration of trichloroethene was 3.1 parts per million (ppm), which exceeds the applicable protection of groundwater soil cleanup objective (0.47 ppm). Historic fill material has been identified across the site to depths of 15-17 feet. Analysis of the material showed benzo(a)anthracene at 32 ppm, benzo(a)pyrene at 31 ppm, benzo(b)fluoranthene at 24 ppm, chrysene at 51 ppm compared the unrestricted SCO of 1 ppm, and indeno(1,2,3-CD)pyrene at 18 ppm compared to the unrestricted SCO of 0.5 ppm. Data does not indicate any off-site impacts in soil related to this site.

Groundwater - TCE was also found in groundwater at the site at a maximum concentration of 8.7 parts per billion (ppb), which slightly exceeds the groundwater standard of 5 ppb. Petroleum related SVOCs were detected across both lots on the site, including benzo(a)anthracene at 66 ppb, benzo(a)pyrene at 61 ppb, benzo(b)fluoranthene at 31 ppb, chrysene at 58 ppb, and indeno(1,2,3-CD)pyrene at 26 ppb, all above the standard of 0.002 ppb. Several metals were detected above standards, including iron, magnesium, manganese and sodium in the majority of samples. These exceedances are not considered contaminants of concern and are likely naturally occurring. Emerging contaminants (i.e., PFAS) were detected at maximum combined concentration of 134.37 parts per trillion. There were no PCBs, pesticides detections above standards. Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor - Petroleum related VOCs were detected at low levels in soil vapor samples across the site. TCE was detected in soil vapor at concentrations ranging from 0.24 micrograms per cubic meter (ug/m3) to 320 ug/m3. 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*.

Access to the site is restricted, which prohibits public access. Persons who enter the site could contact contaminated soil or groundwater by disturbing the surface materials. Contaminated groundwater at the site is not used for drinking or other purposes and 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. Because there are currently no on-site buildings, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern. However, the potential exits for the inhalation of site contaminants for any

future onsite development and occupancy. Environmental sampling indicates that 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**

- 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.

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

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

#### 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 1: Unrestricted use remedy.

The selected remedy is referred to as the Excavation and Groundwater Extraction 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;
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- Maximizing habitat value and creating habitat when possible;
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- 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

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#### 4. Groundwater Extraction

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sufficient to cover the areal and vertical extent of the site. The extraction system will create a depression of the water table so that contaminated groundwater is directed toward the extraction wells within the plume area. Groundwater will be extracted from the subsurface across the site using submersible pumps, pumped to a settling tank and discharged to a New York City Sanitary Sewer for treatment.

### 5. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion, if identified.

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor RAOs, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

In the event that Track 1 unrestricted use is not achieved, including the achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup:

#### 6. **Institutional Controls**

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

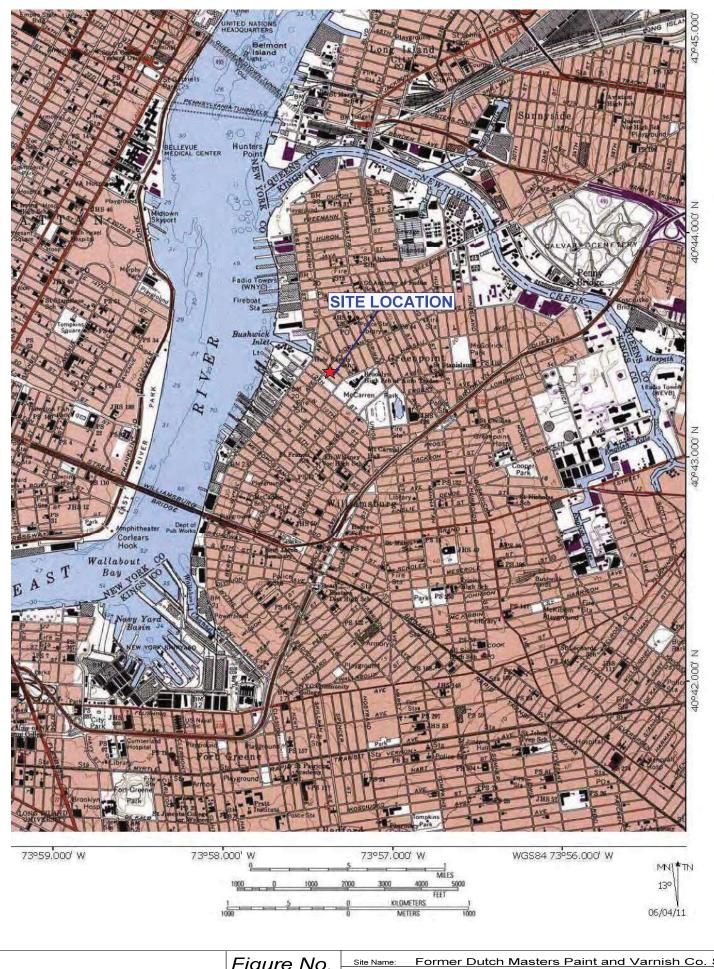
#### Site Management Plan

A Site Management Plan, which would include the following:

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 6 above. This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use, and/or groundwater and/or surface water use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for the existing on-site buildings should they become occupied before they are demolished and 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.
- a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan b. 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 on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



| Figure No. | Site Name:     | Former Dutch Masters Paint and Varnish Co. Site<br>29-41 Wythe Avenue and 180 North 14th Street<br>Brooklyn, New York |
|------------|----------------|---|
| •          | Drawing Title: | Site Location   |

