DECISION DOCUMENT

Former Just4Wheels Site
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224321
July 2022

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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Just4Wheels Site
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224321
July 2022

Statement of Purpose and Basis

This document presents the remedy for the Former Just4Wheels 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 Just4Wheels 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 and the removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. Approximately 1,665 cubic yards of material will be removed from the site. Depth of excavation is approximately 9 feet throughout the site and approximately 12 feet in one location in the northwest corner of the site.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. In Situ Chemical Reduction (ISCR)

In-situ chemical reduction (ISCR) will be implemented to treat chlorinated VOCs and its degradation products including cis-1,2-dichloroethene in groundwater. A chemical reducing agent will be mixed with subsurface soils to destroy contaminants in groundwater throughout the site. The reducing agent will be directly mixed with subsurface soils at depths of 12 to 14 feet, providing a contact with the groundwater impacted with chlorinated VOCs.

Monitoring will be required within the treatment zone to ensure the remedy is effective. Monitoring will be conducted for chlorinated VOCs, dissolved oxygen and oxidation/ reduction potential.

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.

6. Local Institutional Controls

If no Environmental Easement (EE) or Site Management Plan (SMP) is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOHMH code, which prohibits potable use of groundwater without prior approval.

Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use. A Site Management Plan will be developed, and an Environmental Easement will be recorded to address residual groundwater impacts and a soil vapor intrusion (SVI) evaluation of the site, and to implement actions as needed. The SMP requires groundwater monitoring until contaminant concentrations are below groundwater standards, or there is a bulk reduction to asymptotic levels acceptable to the Department. A Track 1 cleanup can only be achieved if any SVI mitigation systems on future buildings and groundwater treatment/monitoring are no longer needed within 5 years of the date of the Certificate of Completion. Upon a demonstration that these components of the remedy are no longer necessary, the SMP and Environmental Easement will be extinguished.

In the event that Track 1 unrestricted use is not achieved, including 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.

7. Institutional Controls

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

- require 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);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict 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
- require compliance with the Department approved Site Management Plan.

8. 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 7 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land and

groundwater use restrictions;

- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provisions 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; and
- 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.

July 27, 2022

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Former Just4Wheels Site
Brooklyn, Kings County
Site No. C224321
July 2022

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, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

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=C224321

Brooklyn Community Board 1
435 Graham Avenue
Brooklyn, NY 11211
Phone: (718) 389-0009

Brooklyn Public Library - Bushwick Branch
340 Bushwick Avenue
Brooklyn, NY 11206
Phone: (718) 602-1348

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

Site Location: The Former Just4Wheels Site is a rectangular 5,000 square foot (0.11 acre) parcel located in an urban area (the Broadway Triangle neighborhood) of Brooklyn. The site is located on the north side of Gerry Street within the block between Throop Avenue and Harrison Avenue. The site's address is 89-91 Gerry Street, and the site is denoted on the New York City tax map as Block 2266, Lots 40 and 41.

Site Features: The site is currently used for parking. A temporary trailer is located in the northeast corner of the site. There are no permanent structures at the site.

Current Zoning and Land Use: The site is zoned RA-7 (residential) for "medium-density apartment house districts". The surrounding properties are currently used for commercial, residential, and warehousing/manufacturing purposes. The nearest residential building is immediately adjacent to the site to northwest.

Past Use of the Site: From the late 1880s through the early 1900s the site was developed with multiple dwellings. By the early 1900s, several of the dwellings were demolished and were replaced with a store, stable, and carriage house. The 89 Gerry Street parcel began operating as a laundry facility in the mid-1930s and operations expanded to 91 Gerry Street in the late 1940s. Both laundry facilities continued operations until the late 1970s when all buildings were demolished, and the site became vacant. Since the mid-2000s, the site has been used as a parking lot for rental vehicles.

Site Geology and Hydrogeology: Site soils consist of 5 to 8 feet of urban fill material comprised of fine to medium brown sand with silt, with pieces of brick, concrete, and glass, underlain by native fine-grained clays ranging in color from light brown to black to depths of 10 to 12 feet below ground surface (ft bgs). Beneath the clay layer is medium to coarse grained brown to light brown sand to a depth of 15 ft bgs. Depth to groundwater ranges from approximately 8 to 10 ft bgs and groundwater flow is towards the north-northwest.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to residential use (which allows for restricted-residential use, commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant 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:

cis-1,2-dichloroethene	cadmium
benzo(a)anthracene	lead
benzo(a)pyrene	mercury
benzo(b)fluoranthene	copper
benzo(k)fluoranthene	zinc
chrysene	silver
dibenz[a,h]anthracene	DDD
indeno(1,2,3-cd)pyrene	DDT
barium	dieldrin

The contaminants of concern exceed the applicable SCGs for:

- soil
- groundwater

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 samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), pesticides, and 1,4-dioxane. Soil vapor samples were analyzed for VOCs. Based upon the investigations conducted to date, the primary contaminants of concern for the site are SVOCs, metals, and pesticides in soil and VOCs in groundwater.

Soil - Soil data were compared to Unrestricted Use Soil Cleanup Objectives (UUSCOs). Contaminants of concern in soil include SVOCs, metals, and pesticides attributed to historic fill. The following SVOCs exceeded UUSCOs in site soils: benzo(a)anthracene up to 25 parts per million (ppm) (UUSCO is 1 ppm), benzo(a)pyrene up to 19 ppm (UUSCO is 1 ppm), benzo(b)fluoranthene up to 22 ppm (UUSCO is 1 ppm), benzo(k)fluoranthene up to 7.8 ppm (UUSCO is 1 ppm), chrysene up to 25 ppm (UUSCO is 1 ppm), dibenzo(a,h)anthracene up to 3.2 ppm (UUSCO is 0.33 ppm), and indeno(1,2,3-cd)pyrene up to 12 ppm (UUSCO is 0.5 ppm). The highest concentrations of SVOCs were generally encountered at depths of 5 to 7 feet below grade; however, at one location in the northwest corner of the site, elevated levels of SVOCs were detected at depths of 9 to 11 feet below grade.

For metals, the following constituents exceeded UUSCOs in site soils: barium up to 437 ppm (UUSCO is 350 ppm), cadmium up to 5.82 ppm (UUSCO is 2.5 ppm), lead up to 752 ppm (UUSCO is 63 ppm), mercury up to 3.8 ppm (UUSCO is 0.18 ppm), copper up to 118 ppm (UUSCO is 50 ppm), silver up to 4.81 ppm (UUSCO is 2 ppm) and zinc up to 1,290 ppm (UUSCO is 109 ppm).

Four pesticides were detected above UUSCOs in site soils including 4,4'-DDD at 0.0498 ppm (UUSCO is 0.0033 ppm), 4,4'-DDE at 1.27 ppm (UUSCO is 0.0033 ppm), 4,4'-DDT at 2.06 ppm (UUSCO is 0.0033 ppm), and dieldrin at 0.0214 ppm (UUSCO is 0.005 ppm).

VOCs, PCBs, and 1,4-dioxane were not detected is site soils above UUSCOs.

Perfluorooctanesulfonic acid (PFOS) was detected in one location at a maximum concentration of 0.954 parts per billion (ppb) in near surface soil which slightly exceeds the unrestricted use guidance value of 0.88 ppb but does not exceed the protection of groundwater or residential guidance values of 3.7 and 8.8 ppb, respectively. PFOA was not detected is site soils at concentrations above the unrestricted use guidance values.

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

Groundwater - The chlorinated VOC (CVOC), cis-1,2-dichloroethene (cis-1,2-DCE) was detected in groundwater samples taken from all six on-site monitoring wells at concentrations ranging from 57 to 320 parts per billion (ppb) exceeding the Ambient Water Quality Standard (AWQS) of 5 ppm.

Several SVOCs and metals were detected in groundwater samples collected from the site at levels exceeding AWQS including benzo(a)anthracene at 0.1 ppb (AWQS is 0.002 ppb), benzo(a)pyrene at 0.1 ppb (AWQS is 0.002 ppb), benzo(k)fluoranthene at 0.1 ppb (AWQS is 0.002 ppb), benzo(b)fluoranthene at 0.27 ppb (AWQS is 0.002 ppb), chrysene at 0.12 ppb (AWQS is 0.002 ppb), indeno(1,2,3-cd)pyrene at 0.2 ppb (AWQS is 0.002 ppb), selenium at 15.6 ppb (AWQS is 10 ppb), manganese at 55,100 ppb (AWQS is 300 ppb), copper at 1240 ppb (AWQS is 200 ppb), silver at 80,300 ppb (AWQS is 50 ppb) and iron at 2,260 ppb (AWQS is 300 ppb). The presence of SVOCs and metals in unfiltered groundwater samples are likely reflective of small amounts of these compounds in soil particles which could not be segregated from groundwater samples or naturally occurring hydrogeologic conditions and/or road salt applications and are not considered to be site-related impacts.

No PCBs or pesticides were detected in groundwater samples above AWQS.

1,4-dioxane was detected in groundwater samples collected from five of the six on-site monitoring wells. The maximum concentration detected was 0.171 ppb which is below the maximum contaminant level (MCL) of 1 ppb.

Perfluorooctanesulfonic acid (PFOS) was detected in site groundwater at a maximum concentration of 116 parts per trillion (ppt) exceeding the MCL (drinking water standard) of 10 ppt. Perfluorooctanoic acid (PFOA) was also detected above its MCL of 10 ppt at a maximum concentration of 214 ppt. No other individual PFAS were detected in groundwater at or above the 100 ppt screening level.

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

Soil Vapor - The CVOC tetrachloroethene (PCE) was detected in site soil vapor samples at concentrations ranging from 69 to 90 micrograms per meter cube (ug/m3). The petroleum related VOC ethylbenzene was also detected in site soil vapor samples at a concentration of 4,280 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.*

The site is completely fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing 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 air of buildings, is referred to as soil vapor intrusion. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. 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 chosen for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing 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.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

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

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, In Situ Chemical Reduction (ISCR) and Vapor Intrusion Evaluation remedy.

The elements of the selected remedy, as shown in Figure 2 and Figure 3 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 and the removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. Approximately 1,665 cubic yards of material will be removed from the site. Depth of excavation is 9 feet throughout the site and 12 feet in one location in the northwest corner of the site.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. In Situ Chemical Reduction (ISCR)

In-situ chemical reduction (ISCR) will be implemented to treat chlorinated VOCs and its degradation products including cis-1,2-dichloroethene in groundwater. A chemical reducing agent will be mixed with subsurface soils to destroy contaminants in groundwater throughout the site. The reducing agent will be directly mixed with subsurface soils at depths of 12 to 14 feet, providing a contact with the groundwater impacted with chlorinated VOCs.

Monitoring will be required within the treatment zone to ensure the remedy is effective. Monitoring will be conducted for chlorinated VOCs, dissolved oxygen and oxidation/ reduction potential.

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.

6. Local Institutional Controls

If no Environmental Easement (EE) or Site Management Plan (SMP) is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOHMH code, which prohibits potable use of groundwater without prior approval.

Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use. A Site Management Plan will be developed, and an Environmental Easement will be recorded to address residual groundwater impacts and a soil vapor intrusion (SVI) evaluation of the site, and to implement actions as needed. The SMP requires groundwater monitoring until contaminant concentrations are below groundwater standards, or there is a bulk reduction to asymptotic levels acceptable to the Department. A Track 1 cleanup can only be achieved if any SVI mitigation systems on future buildings and groundwater treatment/monitoring are no longer needed within 5 years of the date of the Certificate of Completion. Upon a demonstration that these components of the remedy are no longer necessary, the SMP and Environmental Easement will be extinguished.

In the event that Track 1 unrestricted use is not achieved, including 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.

7. Institutional Controls

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

- require 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);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict 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
- require compliance with the Department approved Site Management Plan.

8. 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 7 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provisions 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. 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.