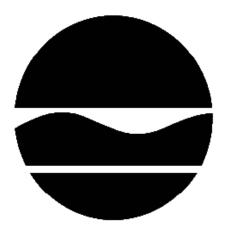
# **DECISION DOCUMENT**

5140 Site Brownfield Cleanup Program Yorkville, Oneida County Site No. C633079 May 2016



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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

5140 Site Brownfield Cleanup Program Yorkville, Oneida County Site No. C633079 May 2016

## **Statement of Purpose and Basis**

This document presents the remedy for the 5140 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 5140 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. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;
- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

#### 2. Soil Excavation

Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils exceeding 1 ppm PCBs in surface soils (0-1 foot) and 10 ppm in subsurface soils (< 1 foot in depth) as per Commissioner Policy CP 51;
- All on-site soil which exceeds the commercial SCOs as defined by 6 NYCRR Part 375-6.8 in the top one foot;

Approximately 370 cubic yards of soil will be excavated from the southern boundary of the site and transported off-site for proper disposal. Most of the excavation will be to a depth of 1 foot below grade but excavation to three feet below grade is anticipated in three areas.

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, to backfill the excavation or re-grade the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for commercial use will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element No 3.

# 3. Cover System

A site cover currently exists over much of the site and will be maintained to allow for commercial use of the site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for commercial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

A site cover will be required in areas that are excavated as required in remedial element No. 2. Where the soil cover is required it will be a minimum of one foot 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 as set forth in 6 NYCRR Part 375-6.7(d).

### 4. Groundwater Evaluation

One round of groundwater samples will be collected from existing monitoring wells and analyzed for VOCs, SVOCs, inorganics and PCBs during the remedial action. Based on the results of the sampling and a determination by the Department on the need for additional remediation, a remedy component will be developed and implemented to address impacts to groundwater and/or soil vapor as necessary.

### 5. Institutional Control

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

### 6. 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 listed in remedy element No. 5 above.

Engineering Controls: The site cover listed in remedial element No. 3 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;
- a provision for further investigation and remediation should the on-site building be demolished, or if the subsurface is otherwise made accessible. The nature and extent of contamination in areas where access was previously limited or unavailable will be immediately and thoroughly investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department determination of the need for a remedy, a Remedial Action Work Plan (RAWP) will be developed for the final remedy for the site, including removal and/or treatment of any source areas to the extent feasible. Citizen Participation Plan (CPP) activities will continue through this process. Any necessary remediation will be completed prior to, or in association with, redevelopment. This includes all buildings, locations of former buildings and the consolidation unit.
- 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 any reoccupied existing or future 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;
- monitoring for vapor intrusion for any reoccupied existing or future 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.

Date

George Heitzman, Director

Remedial Bureau C

# **DECISION DOCUMENT**

5140 Site Yorkville, Oneida County Site No. C633079 May 2016

## **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:

New York Mills Library 399 Main Street New York Mills, NY 13417 Phone: 315-736-5391

## Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs.

Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

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

Location: The site is located in the Town of Whitestown, just outside of the City of Utica in Oneida County. The 5140 Site is located on Commercial Drive near the intersection of Commercial Drive and Oriskany Boulevard.

#### Site Features:

The 1.86 acre site is relatively flat and includes a 25,000 square-foot warehouse and office building built in 1957. The building is presently vacant. Paved parking areas are noted to the south and east of the building. Some green space is found along Commercial Drive and to the north of the building.

## Current Zoning/Use:

The site is zoned commercial/industrial. Adjacent properties are generally commercial. The site is bounded to the north by Commercial Drive, to the east by vacant land and a commercial office building, to the south by commercial property and to the west by a residential flooring store.

### Past Uses of the Site:

Starting in 1957 the site was used as an electrical transformer repair facility. The building is reported to have included a large transformer pit, aboveground storage tanks, and below ground piping to manage used and reclaimed transformer oils. In 1986, the site was used as a motor repair facility.

Several cleanup actions were conducted at the site prior to the site entering the Brownfield Cleanup Program (BCP). In 2000 approximately 230 tons of PCB contaminated soil was removed along the property line by the adjacent property owner, O.W. Hubbell and Sons, Inc.

In September 2011, a previous owner (Palmerton Group) cleaned interior floors and sump areas within the building. The cleaned areas were then encapsulated with an epoxy coating. Approximately 17,000 square feet of floors and sumps were cleaned and encapsulated. Also in 2011, the Palmerton Group excavated PCB contaminated soil adjacent to the exterior concrete pad. The excavation went to a depth of about 5 feet. Additional contaminated soil was noted below the concrete pad which was not removed at that time. The volume of soil removed is not known.

The warehouse and office building have been vacant since 2009. The site was purchased in August 2015 and is currently undergoing renovations to allow for a showroom for overhead doors and hardware.

Site Geology and Hydrology: The site geology consists of sand and gravel mixtures at the surface, a silt unit that extends as deep as 8 feet below ground surface, and an interval of gravelly silt or

sand extending to a depth of between 15 and 18 feet below ground surface. Groundwater was encountered within the lower gravelly silt interval at depths ranging between 11 and 14 feet below ground surface. The flow across the site is to the northeast towards Sauquoit Creek.

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 commercial use (which allows for 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(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
- indoor air
- sub-slab 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:

polychlorinated biphenyls (PCB) tetrachloroethylene (PCE) trichloroethene (TCE)

The contaminant(s) of concern exceed the applicable SCGs for:

- soil
- soil vapor intrusion

# **6.2:** <u>Interim Remedial Measures</u>

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Source Removal Action

An Interim Remedial Measure was conducted in February 2014 and included removal of an exterior concrete slab, excavation of accessible PCB contaminated soil greater than 1 parts per million (ppm) within 1 foot of the surface and 10 ppm at greater depths, and off-site disposal of soil and debris. In addition, soil from a soil berm along the southern property line was also removed due to PCBs exceeding 1 ppm. The excavation area was backfilled with soil meeting the soil cleanup objectives (SCOs) for commercial use, regraded, and seeded with grass. Approximately 1,000 cubic yards of soil and debris were removed from the concrete pad area and the southern soil berm area. The IRM completion report was approved in October 2015.

## **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:

Soils were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs). Groundwater was analyzed for PCBs. Based on the investigations and the documentation sampling during the IRM, PCBs are the primary contaminant of concern.

Soils: An area of PCBs above 1 ppm is present in surface soil behind the on-site building. The approximate area of the surface soil contamination is about 13,000 square feet. Three small areas within this area contain PCBs exceeding 10 ppm to a depth of about 3 feet. About 370 cubic yards of soil is estimated to contain PCBs above 10 ppm. In addition, there is an area of subsurface PCB contamination underneath the current building that approaches 10 ppm that was not removed during the 2014 IRM. Exposed surface soils in the greenspace along Commercial Drive and to the north of the building were sampled and shown to meet commercial SCOs. Tetrachloroethylene (PCE) has not been detected in site soils, although it was found in low levels in sub-slab vapor. Benzo (a) pyrene (BaP) was noted in shallow site soils just below the asphalt parking lot (0.5 - 1 feet below grade) ranging from 1.8 to 3.4 ppm. Deeper soils did not have detectable levels of BaP. The BaP detections in shallow soils are believed to be derived from the paving materials. Except for arsenic at 18.7 ppm (commercial SCO is 16 ppm) in one soil sample (SB40) taken from 4' to 6', no other metals were found to be above commercial SCOs. There are no other constituents of concern in the soils.

Groundwater: Historically PCBs had been detected in on-site groundwater at levels up to 0.346 parts per billion (ppb), but after the February 2014 IRM, PCBs have not been detected in site groundwater. A review of the site history indicates no use of chlorinated solvents. Because soil sampling during the RI found no indications of VOCs or SVOCs in site soils (with the exception of BaP), VOCs were not sampled in groundwater.

Soil Vapor and Indoor Air: Trichloroethene (TCE) was detected in sub-slab soil vapor under the building at concentrations ranging from non-detect to 20 ug/m3. The maximum indoor air concertation of TCE was 0.27 ug/m3. Tetrachloroethene (PCE) was detected in the sub-slab vapor samples ranging from non-detect to 74 ug/m3. However, PCE was not detected in any of the four (4) indoor air samples. These sub-slab vapor levels indicate that additional evaluations are warranted if the on-site building becomes reoccupied.

VOC were only detected in soil vapor under the building. VOCs were not detected in subsurface soils outside of the building. Based on the soil sampling performed on-site, the VOC contamination is not expected to be present off-site.

Surface Water: Surface water runs to the east to Commercial Drive. The Sauquiot Creek is located to the north east of the site across State Route 12. There was no surface water observed on the site and surface water was not sampled. There is no indication that PCB contamination has migrated off the site in groundwater or surface water.

## **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 not fenced and persons who enter the site could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil. People are not drinking the potentially contaminated groundwater because the area is served by a public water supply that is not affected by site related contamination. Volatile organic compounds which may be present in soil or groundwater beneath the on-site building can move into the soil vapor (air spaces within the soil), which in turn may move into the overlying building 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 the site is vacant, the inhalation of site related contaminants due to soil vapor intrusion does not represent a current concern. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Furthermore, environmental 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**

• 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 2: Restricted use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Excavation remedy.

The elements of the selected remedy, as shown in Figure 3, are as follows:

- 1. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;
- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;

- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

#### 2. Soil Excavation

Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils exceeding 1 ppm PCBs in surface soils (0-1 foot) and 10 ppm in subsurface soils (< 1 foot in depth) as per Commissioner Policy CP 51;
- All on-site soil which exceeds the commercial SCOs as defined by 6 NYCRR Part 375-6.8 in the top one foot;

Approximately 370 cubic yards of soil will be excavated from the southern boundary of the site and transported off-site for proper disposal. Most of the excavation will be to a depth of 1 foot below grade but excavation to three feet below grade is anticipated in three areas.

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, to backfill the excavation or re-grade the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for commercial use will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element No 3.

# 3. Cover System

A site cover currently exists over much of the site and will be maintained to allow for commercial use of the site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper one foot of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for commercial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

A site cover will be required in areas that are excavated as required in remedial element No. 2. Where the soil cover is required it will be a minimum of one foot 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 as set forth in 6 NYCRR Part 375-6.7(d).

#### 4. Groundwater Evaluation

One round of groundwater samples will be collected from existing monitoring wells and analyzed for VOCs, SVOCs, inorganics and PCBs during the remedial action. Based on the results of the sampling and a determination by the Department on the need for additional remediation, a remedy component will be developed and implemented to address impacts to groundwater and/or soil vapor as necessary.

#### 5. Institutional Control

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

## 6. 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 listed in remedy element No. 5 above.

Engineering Controls: The site cover listed in remedial element No. 3 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;
- a provision for further investigation and remediation should the on-site building be demolished, or if the subsurface is otherwise made accessible. The nature and extent of contamination in areas where access was previously limited or unavailable will be immediately and thoroughly investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department determination of the need for a remedy, a Remedial Action Work Plan (RAWP) will be developed for the final remedy for the site, including removal and/or treatment of any source areas to the extent feasible. Citizen Participation Plan (CPP) activities will continue through this process. Any

- necessary remediation will be completed prior to, or in association with, redevelopment. This includes all buildings, locations of former buildings and the consolidation unit.
- 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 any reoccupied existing or future 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;
- monitoring for vapor intrusion for any reoccupied existing or future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

