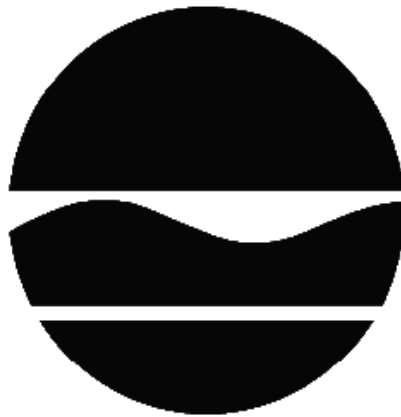


DECISION DOCUMENT

Main and East Balcom Street Site
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915306
October 2018



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

DECLARATION STATEMENT - DECISION DOCUMENT

**Main and East Balcom Street Site
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915306
October 2018**

Statement of Purpose and Basis

This document presents the remedy for the Main and East Balcom Street Site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Main and East Balcom Street 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

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

- soil/fill that is creating a nuisance condition, as defined in Commissioner Policy CP-51 Section G; and
- soil/fill exceeding restricted-residential soil cleanup objectives (RRSCOs) for metals.

RRSCOs are being used to guide the excavation, but do not necessarily represent the ultimate achievement of SCOs across the site. Approximately 3,500 tons of contaminated soil/fill will be removed from 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. On-site soil which does not exceed the above excavation criteria may be used below the cover system described in remedy element 4 to backfill the excavation, to the extent that a sufficient volume of on-site soil is available.

4. Site Cover

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

5. Supplemental Groundwater Investigation

Further assessment of low-level, volatile organic compound (VOC) groundwater impacts near the northeastern site boundary will be completed as part of the remedial work, including additional well installation and groundwater sampling. If the results of the groundwater assessment indicate remediation is required, details for groundwater treatment will be provided to the Department for review and approval. The details for completing the assessment, and treating the groundwater if necessary, will be provided in a Remedial Action Work plan.

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

7. 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 above in remedy element 6.

Engineering Controls: The site cover system described above in remedy element 4.

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 use and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described above in remedy element 4 will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of the soil (site cover system) 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 new 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

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Main and East Balcom Street Site
Buffalo, Erie County
Site No. C915306
October 2018

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:

Buffalo & Erie County Public Library
1 Lafayette Square
Buffalo, NY 14203
Phone:

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 Main and East Balcom Street site is an approximately 1-acre site located in the City of Buffalo, near the corner of Main and East Balcom Streets. The site is bordered by Main Street on the west and East Balcom on the north. A vacant lot is located to the east and commercial property (a Niagara Frontier Transportation Authority bus garage) to the south and east. A mixed-use, residential and commercial building, is located offsite but adjacent to the site building, at the corner of Main and East Balcom.

Site Features:

The site is currently improved with a six-story commercial building, which is currently vacant. The remainder of the site is vacant land covered with gravel, demolition debris (broken brick and concrete), sparse vegetation, and weathered asphalt pavement. A light rail subway tunnel follows the length of Main Street, past the west side of the site.

Current Zoning and Land Use:

Site is in Buffalo's Urban Center (N-2) zoning district. Urban Center areas are described as mixed-use neighborhood centers composed primarily of commercial block structures. The planned reuse of the site as a mixed-use residential development (apartments and retail space) is consistent with current and anticipated future zoning.

Past Use of the Site:

Portions of the site have a long history of being utilized for warehouse-storage and trucking, gas stations, retail (donut bakery), and private residences. The existing building was constructed, and until recently, used as a warehouse.

Past site uses that appear to have led to the site contamination include petroleum storage tanks associated with the warehouse and gas stations, and the fill material present across the site.

Site Geology and Hydrogeology:

Fill material was identified across the site to varying depths, ranging from the surface to 11 feet below the surface. The fill consists of brick, concrete, wood, cinders and ash. Beneath the fill is a reddish-brown clay and sand. Soil borings and test pits to depths of approximately 20 feet, did not encounter bedrock.

Groundwater was encountered 12 to 15 feet below ground surface and flows in a northerly direction, towards Scajquada Creek and the Niagara River.

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 restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the 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: <http://www.dec.ny.gov/regulations/61794.html>

6.1.2: RI Results

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

benzo(a)anthracene	trans-1,2-dichloroethene
benzo(a)pyrene	trichloroethene (TCE)
benzo(b)fluoranthene	vinyl chloride
dibenz[a,h]anthracene	arsenic
chrysene	barium
indeno(1,2,3-CD)pyrene	lead
cis-1,2-dichloroethene	

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.

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

IRM - Tank Removal

In mid-July 2017, a 5,000-gallon underground storage tank (UST) was uncovered and removed from outside the east corner of the building. The interior of the tank was vacuumed and cleaned.

The tank was scrapped and the cleaning residuals were transported offsite for disposal. Approximately 264 tons of petroleum-impacted soil was excavated from around the tank and transported offsite for disposal. All volatile organic compounds (VOCs) reported in the post-excavation soil samples were below unrestricted soil cleanup objectives (USCOs). The UST excavation was backfilled with stone.

A pump island was once located a short distance northwest of the UST. Based on visual and olfactory evidence, approximately 90 tons of petroleum impacted soil was excavated and disposed offsite. Post-excavation VOC results were all below unrestricted use soil cleanup objectives (USCOs).

In mid-October 2017, an above ground tank (AST) in the basement of the building, was vacuumed and cleaned, along with the attached piping. The cleaned AST and piping were scrapped, and the cleaning residuals were disposed offsite. Post-removal soil samples from beneath the concrete floor, beneath and around the location of the AST, reported all VOCs below restricted-residential soil cleanup objectives (RRSCOs). The details of the IRMs are discussed in the July 2018 Remedial Investigation/IRM/Alternatives Analysis report.

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.

Near Surface Soil/Fill

Fill material was found at the surface across the site, intermingled with soil. The surface material was considered unsuitable as cover soil material, but was sampled to determine its suitability as subsurface backfill for excavations onsite. Near surface soil/fill samples were collected from the surface to a depth of 2 feet below ground surface. Samples were tested for semi-volatile organic compounds (SVOCs), VOCs, metals, pesticides, herbicides and PCBs.

The majority of SVOCs were reported as concentrations less than their respective USCOs. Certain SVOCs, categorized as polycyclic aromatic hydrocarbons (PAHs), were reported above RRSCOs, all occurring at one sample location, specifically: benzo(a)anthracene (6.6 parts per million (ppm); RRSCO 1 ppm), benzo(a)pyrene (4.9 ppm, RRSCO 1 ppm), benzo(b)fluoranthene (6.8 ppm, RRSCO 1 ppm), chrysene (6.3 ppm, RRSCO 3.9 ppm), dibenzo(a,h)anthracene (0.71 ppm, RRSCO 0.33 ppm), and indeno(1,2,3-cd)pyrene (2.9 ppm, RRSCO 0.5 ppm).

No metals, VOCs, PCBs or herbicides/pesticides were detected exceeding RRSCOs.

Subsurface Soil/Fill

Samples were tested for SVOCs, metals, volatile organic compounds (VOCs), pesticides, herbicides and PCBs.

SVOCs (PAHs) reported at concentrations exceeding RRSCOs included: benzo(a)anthracene (up to 6.3 ppm, RRSCO 1 ppm), benzo(a)pyrene (up to 5.1 ppm, RRSCO 1 ppm), benzo(b)fluoranthene (up to 8.5 ppm, RRSCO 1 ppm), chrysene (up to 5.7 ppm, RRSCO 3.9 ppm), and indeno(1,2,3-cd)pyrene (up to 3.7 ppm, RRSCO 0.5 ppm).

Metals at concentrations exceeding RRSCOs included: arsenic (17 ppm), barium (2,460 ppm) and lead (2,820 ppm); the corresponding RRSCOs are 16, 400 and 400 ppm, respectively. All other samples, for all other metals, reported concentrations below RRSCOs.

No VOCs, PCBs, pesticides or herbicides were reported above USCOs.

The results did not indicate any off-site impacts to soil related to this site.

Groundwater

Samples were tested for VOCs, SVOCs, metals, PCBs, pesticides, herbicides, perfluoro alkyl substances (PFAs) and 1,4 dioxane.

VOCs were reported at concentrations above groundwater quality standards (GWQSs) in the one monitoring well located at the downgradient end of the site. The VOCs included: benzene (3.4 parts per billion (ppb), GWQS 1 ppb), cis-1,2 dichloroethene (39 ppb, GWQS 5 ppb), trans-1,2 dichloroethene (100 ppb, GWQS 5 ppb), trichloroethene (17 ppb, GWQS 5 ppb) and vinyl chloride (6.9 ppb, GWQS 2 ppb). Trichloroethene was also reported in an upgradient monitoring well at 30 ppb.

No SVOCs were reported above GWQSs.

Metals reported at concentrations above GWQSs were limited to naturally-occurring minerals, including iron, magnesium and sodium. No other metals were detected above GWQSs.

No PCBs were reported above the GWQS.

Pesticides and herbicides reported above GWQS included heptachlor (0.047 ppb, GWQS 0.04 ppb) and Endrin (0.012 ppb estimated, GWQS non-detectable).

The PFAs, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported at a combined concentration of up to 37 parts per trillion (ppt). The highest concentration of 1,4 dioxane reported was 288 ppt. These concentrations are below screening limits (70 and 350 ppt for PFOA and PFOS combined, and 1,4 dioxane respectively) for groundwater that is not used as source of drinking water.

Further investigation is necessary to determine the source, extent and impact of the elevated VOCs reported at the downgradient site boundary.

Indoor Air and Sub-slab Vapor

Samples of soil vapor were collected from beneath the basement floor of the building (sub-slab vapor) and the air within the basement and outside the building, to qualitatively assess the

potential impacts of contaminated soil vapor infiltrating the building. The samples were collected after the removal of the AST, but prior to attaining optimal building conditions, i.e., before renovations were completed and any heating/ventilation systems were operating.

The samples were tested for VOCs. Most of the VOCs were reported as non-detect or trace (estimated) concentrations. The reported concentrations suggest that no further action was required based on this preliminary sampling event conducted prior to building/basement renovations. However, additional evaluation is necessary to evaluate the soil vapor intrusion pathway after building renovations are complete.

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 mostly covered with one building and asphalt. People will not come into contact with site-related soil or groundwater contamination unless they dig below the ground surface. 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 the contaminated groundwater or contaminated soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The on-site building is not currently occupied and therefore, inhalation of site contaminants in indoor air due to soil vapor intrusion is not a current concern.

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.

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.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The elements of the selected remedy, as shown in Figures 2a and 2b, 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

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

- soil/fill that is creating a nuisance condition, as defined in Commissioner Policy CP-51 Section G; and
- soil/fill exceeding restricted-residential soil cleanup objectives (RRSCOs) for metals.

RRSCOs are being used to guide the excavation, but do not necessarily represent the ultimate achievement of SCOs across the site. Approximately 3,500 tons of contaminated soil/fill will be removed from 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. On-site soil which does not exceed the above excavation criteria may be used below the cover system described in remedy element 4 to backfill the excavation, to the extent that a sufficient volume of on-site soil is available.

4. Site Cover

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

5. Supplemental Groundwater Investigation

Further assessment of low-level, volatile organic compound (VOC) groundwater impacts near the northeastern site boundary will be completed as part of the remedial work, including additional well installation and groundwater sampling. If the results of the groundwater assessment indicate remediation is required, details for groundwater treatment will be provided to the Department for review and approval. The details for completing the assessment will be provided in a Remedial Action Work plan.

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

7. 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 above in remedy element 6.

Engineering Controls: The site cover system described above in remedy element 4.

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 use and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described above in remedy element 4 will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of the soil (site cover system) 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 new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.