DECISION DOCUMENT

Oil City/Carousel Center - Phase 1
Brownfield Cleanup Program
Syracuse, Onondaga County
Site No. C734104
October 2011

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

DECLARATION STATEMENT - DECISION DOCUMENT

Oil City/Carousel Center - Phase 1
Brownfield Cleanup Program
Syracuse, Onondaga County
Site No. C734104
October 2011

Statement of Purpose and Basis

This document presents the remedy for the Oil City/Carousel Center - Phase 1 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 Oil City/Carousel Center - Phase 1 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. Based on the results of the investigations at the site and the remedy implemented, the Department has selected No Further Action with continued operation and maintenance of the SSDS and cover system to mitigate potential exposures to soil vapor, and the implementation of ICs/ECs as the remedy for the site.

2. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).

b) allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), though land use is subject to local zoning laws;

c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;

d) requires compliance with the Department approved Site Management Plan;

3. 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 engineering controls remain in place and are effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 2 above.

Engineering Controls: The soil cap, vapor barrier and the sub-slab depressurization system discussed in Section 2.

This plan includes, but may not be limited to:

i. an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

ii. a description of the provisions of the environmental easement including any land use or groundwater use restrictions;

iii. a provision for the management and inspection of the identified engineering controls;

iv. the maintenance of site access controls and Department notification; and

v. the steps necessary for the periodic reviews and certification of the institutional and engineering controls;

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

i. monitoring of soil vapor to assess the performance and effectiveness of the remedy;

ii. a schedule of monitoring and frequency of submittals to the Department;

c. an Operation and Maintenance Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

i. compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;

ii. the maintenance of site access controls and Department notification; and

iii. providing the Department access to the site and O&M records.

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.

10/31/11
Date

William Daigle, Director
Remedial Bureau D

DECISION DOCUMENT

Oil City/Carousel Center - Phase 1
Syracuse, Onondaga County
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October 2011

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:

Robert P. Kinchen Central Library
The Galleries of Syracuse
447 South Salina Street
Syracuse, NY 13204-2494
Phone: (315) 435-1900

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 Oil City/Carousel Center - Phase 1 Site is located in an urban area of Onondaga County at 306 West Hiawatha Boulevard in the City of Syracuse. The site occupies an area of approximately 10 acres in the southeast portion of the lands generally referred to as the Carousel Center site, between the existing Carousel Center building and West Hiawatha Boulevard. The Phase I Site is located within the overall boundaries of the Destiny Project Area and is generally bounded by: Onondaga Lake and Conrail tracks, to the northwest; Interstate 81 to the north and northeast; Hiawatha Street to the south and southeast; and the NYS Barge Canal to the west and southwest. The Destiny Project Area consists of eight additional contiguous BCP sites.

Site Features: The only site feature is an 800,000 square-foot building expansion to the existing Carousel Center Mall, which borders the western side of the Phase I site. The site consists of the 450,000 square-foot building expansion footprint.

Current Zoning/Use: The site is currently active and is zoned for industrial use. Land uses surrounding the site generally consist of business districts and mixed residential property located approximately 1/2 mile to the northeast.

Historical Uses: Prior to construction of the Carousel Center mall expansion, the Phase I Site consisted of surface parking lots and associated driveway areas for Carousel Center. Prior to that (i.e. pre-1989), a portion of each of the following uses was located in the area of the Phase I Site: Marley Scrap Yard, Buckeye Petroleum Tank Farm, the Amerada Hess Petroleum Tank Farm, and the Clark Concrete Company. Prior uses that appear to have led to site contamination include disposal of PCB-contaminated electrical equipment, disposal of Allied Chemical alkali waste (Solvay waste), disposal of contaminated scrap metal and solvents, and oil storage in above ground storage tanks and below ground pipelines.

In July 1988, approximately 200 tons of hazardous PCB-contaminated soil was excavated from the eastern side of the Phase 1 site on the Former Marley Scrap Yard property. During construction of the adjacent Carousel Center in 1989-1990, contaminated soils were graded and spread throughout the Carousel Center site, including the Phase I site, and a slurry wall was constructed around Carousel Center to maintain hydraulic control under the mall. Approximately 1,300 linear feet of the slurry wall is installed through the Phase I site area. In 1990, a groundwater underdrain system associated with remediation of the Clark Property (NYSDEC Inactive Hazardous Waste Site No. 734048) was installed which extends to the western boundary of the Phase I site. In 1992, the Amerada Hess groundwater collection trench was installed immediately downgradient of the Phase I site.

In November 2007 through August 2008, approximately 88,000 cubic yards of contaminated soil was excavated from the Phase I site for installation of the mall expansion slab. This soil was placed on the former Mobil 24 parcel (included in BCP Site No. C734136, Site 8). Approximately 15 cubic yards of free product and petroleum impacted soils were also excavated and brought to the biopile on Solar Street (included in BCP Site No. C734137, Site 9). After excavation was complete, a minimum layer of 4 inches of clean sand, 6 inches of fly ash/cardboard, or 6 inches of asphalt, consistent with Part 375-6.7(d), was brought in and placed on top of the remaining soils.

A Remedial Investigation (RI) was conducted at the site June 2008 through April 2009. Since contaminated soils, groundwater, and soil vapor remained beneath the Phase I site after completion of the soil excavation, engineering controls were implemented by the applicant which consisted of installation of a concrete cap (May 2008), and a vapor barrier/subslab depressurization system (SSDS) below the entire site (i.e. building footprint) (September 2008 through May 2009).

On July 18, 2011, the Department signed the Brownfield Cleanup Agreement for the site, the effective date of which is June 28, 2005. The Applicant has previously submitted a Remedial Investigation Work Plan ("Phase I RIWP"), a Remedial Investigation Report ("Phase I RIR"), and a Remedial Work Plan ("Phase I RWP"). These documents are all available for public review in the document repository for this Site. These documents relate to the activities described above.

Site Geology: Soils underlying the Phase I site consist of up to 37 feet of highly variable fill containing Solvay waste, C&D debris, metal salvage material and miscellaneous debris (wood, glass, brick, etc.). The fill is underlain by native deposits of sand, silt and gravel, with bedrock occurring at approximately 200 feet below ground surface. Groundwater beneath the Phase I site flows in a west-northwesterly direction towards the NYS Barge Canal located approximately 400 feet west of the site. The Barge Canal flows into Onondaga Lake approximately 700 feet downgradient. Depth to groundwater at the site is approximately 6 feet below ground surface.

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 under the Brownfield Cleanup Agreement is a Participant. The Applicant has an obligation to address on-site and off-site contamination. 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 6.4.

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 Information

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

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:

petroleum products	arsenic
pcb-aroclor 1260	copper
trichloroethene (tce)	benz(a)anthracene
benzene	benzo(a)pyrene
chlorobenzene	benzo(b)fluoranthene
barium	dibenz[a,h]anthracene
manganese	chromium

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

- groundwater
- soil
- soil vapor

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 Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

People are not drinking contaminated groundwater because the area is served by a public water supply that is not affected by site-related contamination. Potential contact with residual contaminants in the soil or groundwater is unlikely unless people dig below the concrete slab of the on-site building. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A sub-slab depressurization system was installed in the on-site building to prevent vapors beneath the concrete slab from entering the building.

6.4: 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.

Remedial actions at the site are complete and consisted of excavation of 88,000 cubic yards of soil, installation of a cover system over the entire site (i.e. building footprint), and installation of a SSDS system. Prior to remediation, the primary contaminants of concern were petroleum products, heavy metals, and PCBs in soil, and trichloroethene (TCE) in soil vapor. Groundwater is impacted with VOCs, SVOCs, and metals at levels that do not require further remediation given the Destiny Project Area efforts to address groundwater.

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.

There are no remedial action objectives chosen for this 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 4: Restricted use with site-specific soil cleanup objectives remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Based on the results of the investigations at the site and the remedy implemented, the Department has selected No Further Action with continued operation and maintenance of the SSDS and cover system to mitigate potential exposures to soil vapor, and the implementation of ICs/ECs as the remedy for the site.

2. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

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ii. a description of the provisions of the environmental easement including any land use or groundwater use restrictions;

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iv. the maintenance of site access controls and Department notification; and

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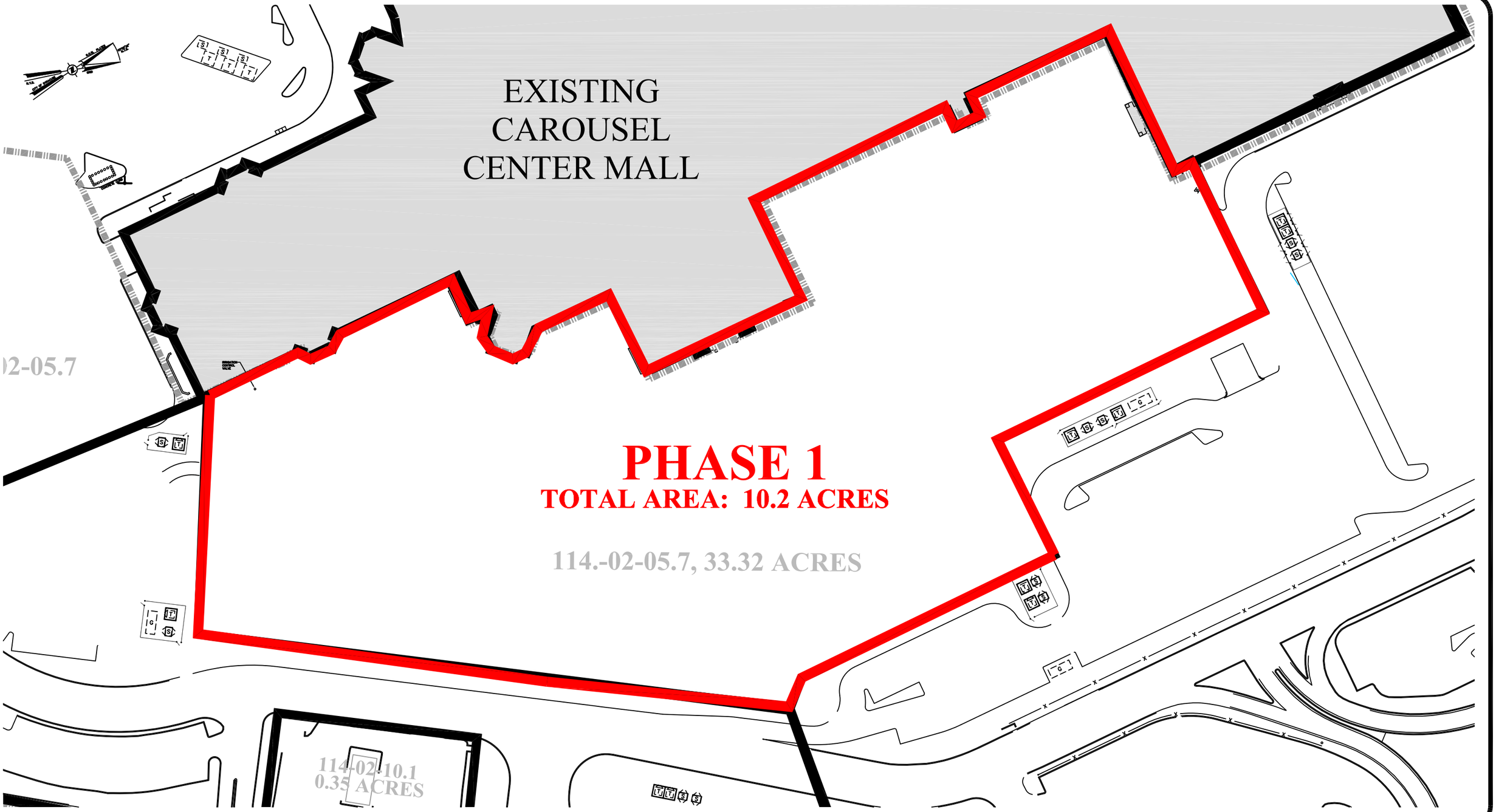
ii. the maintenance of site access controls and Department notification; and

iii. providing the Department access to the site and O&M records.



LEGEND

- PARCEL BOUNDARIES
- SITE BOUNDARY
- ADJACENT BCP SITE BOUNDARIES

PHASE 1 AREA MAP DETAILS

PROPERTY ADDRESS	TAX PARCEL ID	AREA
306 HIAWATHA BOULEVARD W	114.–02–05.7	10.2 ACRES

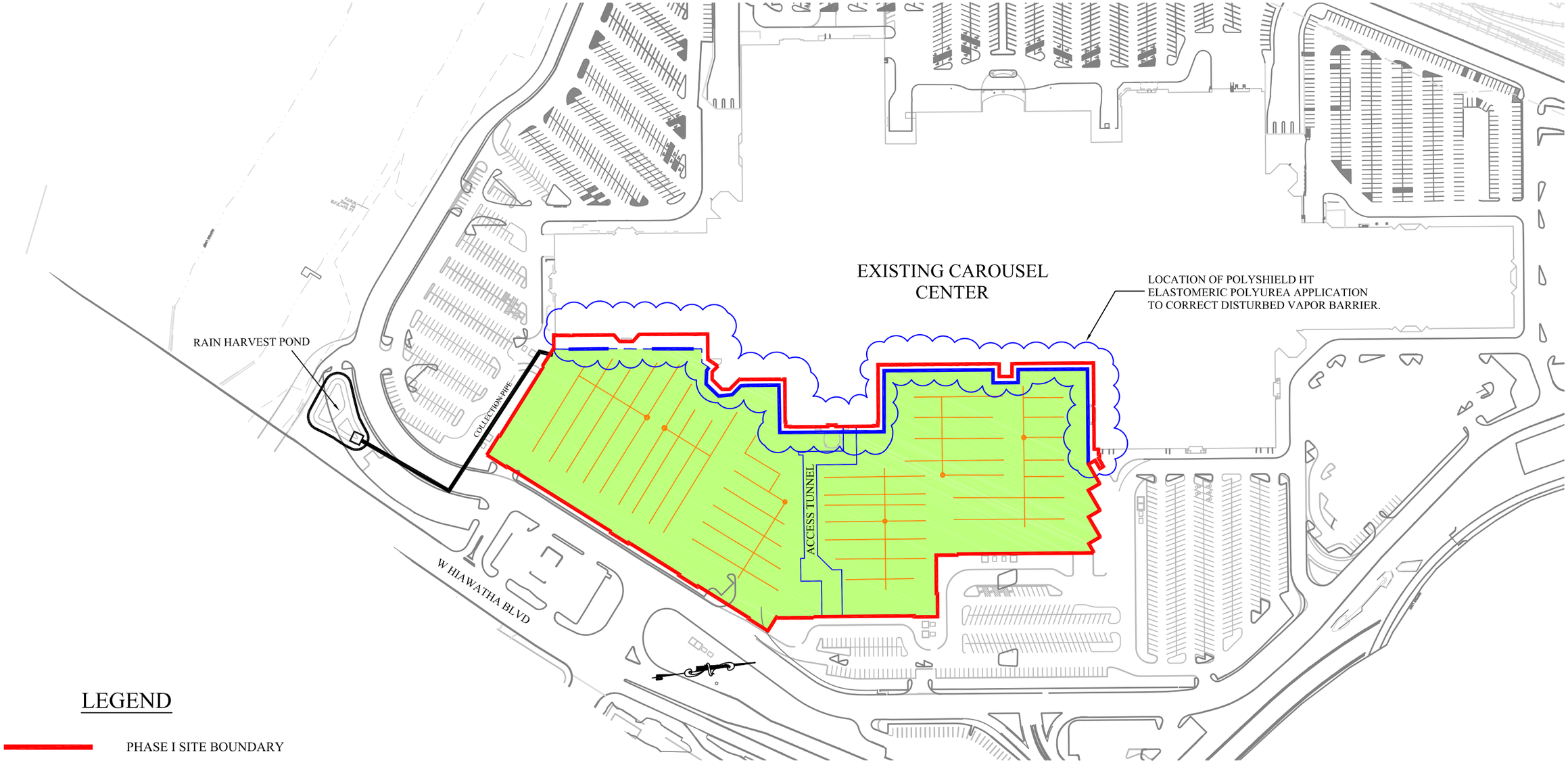
Total: 10.2 acres

SPECTRA ENVIRONMENTAL GROUP, INC.
19 British American Blvd.
Latham, NY 12110

PHASE 1 AREA MAP
306 HIAWATHA BOULEVARD WEST
DESTINY USA
BROWNFIELD CLEANUP PROGRAM

CITY OF SYRACUSE ONONDAGA COUNTY, NY

PROJ. No.:	08162	DATE:	6/30/11	SCALE:	1"=100'	DWG. NO.	BCP SITE	FIGURE	1



LEGEND

- PHASE I SITE BOUNDARY
- LIMITS OF VAPOR BARRIER
- VAPOR CONTROL PIPE LATERAL
- VAPOR CONTROL SYSTEM RISER AND BLOWER LOCATION (EXTENDS FROM 1ST FLOOR TO ROOF) SEE DETAILS SHEETS APPENDIX K
- EXISTING TUNNEL WALL

NOTE: MAP BASED ON DRAWINGS FROM O'BRIEN AND GERE ENGINEERS, INC. ISSUED FOR CONSTRUCTION 06/06/2007

NO.	DATE	REVISIONS	DRN	CKD	APPR

PROJECT	
PROJ. ENGR.:	
PROJ. NO.:	06448
DESIGNED BY:	MGR
DRAWN BY:	REW
CHECKED BY:	
APPROVED BY:	
DATUM:	CITY OF SYRACUSE
CONTOUR INTERVAL =	NA

0 50' 100' 200'
1" = 200'

ALTERNATIVE NO. 4
ENGINEERING CONTROLS PLAN
PHASE I SITE

CITY OF SYRACUSE, NEW YORK — ONONDAGA COUNTY

SPECTRA ENVIRONMENTAL GROUP, INC.
19 British American Boulevard
Latham, New York 12110
TEL (518) 782 0882 FAX (518) 782 0973

DATE:05/08/09 | SCALE: 1" = 200' | DWG. NO. 06448 | FIGURE 2