DECISION DOCUMENT

700 Out Parcel, LLC
Brownfield Cleanup Program
Syracuse, Onondaga County
Site No. C734111
February 2016

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

DECLARATION STATEMENT - DECISION DOCUMENT

700 Out Parcel, LLC
Brownfield Cleanup Program
Syracuse, Onondaga County
Site No. C734111
February 2016

Statement of Purpose and Basis

This document presents the remedy for the 700 Out Parcel, LLC 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 700 Out Parcel, LLC 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. A site cover will be required to allow for commercial use of the site. The cover will consist

either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

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

•requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
•allows the use and development of the controlled property for commercial and industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
•restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
•requires compliance with the Department approved Site Management Plan.

4 A Site Management Plan is required, which includes the following:

An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 3 above.

Engineering Controls: The site cover system discussed in Paragraph 2 and discussed in Paragraph 2 above.

This plan includes, but may not be limited to:

a. 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 water use restrictions;

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 provision for evaluation of the potential for soil vapor intrusion for future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.

c. 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 buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

d. A provision for treating the groundwater if the groundwater monitoring data do not demonstrate significantly reduced total VOC concentrations within two years following remedy construction. Selection of the specific remedial technology will consider the monitoring data, but it is currently anticipated that injection of oxygen releasing compounds (ORC) would be used.

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.

2/22/16
Date

William Daigle, Director
Remedial Bureau D

DECISION DOCUMENT

700 Out Parcel, LLC
Syracuse, Onondaga County
Site No. C734111
October 2015

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:

Onondaga County Public Library
Attn: Local History Department
447 South Salina Street
Syracuse, NY 13202
Phone: 315-435-1800

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 at 701-709 East Water Street in the City of Syracuse, Onondaga County, New York. The site is located in an urban area, bordered by Almond Street to the west, Erie Blvd. East to the north, and Syracuse University's Center of Excellence for Research and Development to the south. The site lies within the shadows of the elevated interstate highway exchanges of Interstate Route 81 north-bound and Interstate 690 east-bound.

Site Features:

The site is approximately 0.43 acres in size. Currently the site is a vacant parking lot with broken-up pavement and gravel surface.

Current Zoning and Land Use:

The site and surrounding properties are located in a commercial-retail use zoned urban area. The property was last used as a commuter parking lot. Currently the site is not being utilized and fencing surrounds the property.

Past Use of the Site:

From 1949 to 1964, the site operated as a gasoline filling station and included five (5) gasoline underground storage tanks (USTs), one fuel-oil UST and one waste-oil UST. Thereafter, it has been used as a parking lot.

Upon discovery of petroleum-impacted soils on two separate occasions the New York State Department of Environmental Conservation (NYSDEC) Spill Hotline was called, and spill ID Numbers 01-11549 (March 7, 2002) and 06-10014 (December 4, 2006) were assigned to the site.

As part of the 2006 spill response, seven underground storage tanks (USTs) were removed from the site which included the removal of: four 1,000-gallon gasoline USTs, two 550-gallon USTs (one fuel oil and one waste oil) and one 4,200-gallon gasoline UST. Approximately 1,800 tons of contaminated soil was staged on-site during the removal of the former USTs. In May 2008, these soils were removed from the site and disposed at a regulated landfill.

Several investigations were conducted and corresponding reports prepared in regard to

contamination and clean-up measures at the site before entering the Brownfield Cleanup Program.

Site Geology and Hydrogeology:

The top 18 inches of the site consist of several layers of pavement and gravel. Underlying this layer the soil is urban fill material including brick rubble, coal-ash, stone, sand, some lumber and broken up pavement to a depth of approximately five to six feet. The urban fill layer is underlain by a layer of brownish sand with some fine gravel and silty-clays from 7 to 13 feet. Underlying this layer is a fine light brown sand along with a dry very stiff compact silt-clay layer from 14 to 18 feet. Groundwater is encountered at approximately 7 feet below grade, with a flow direction to the south-southeast.

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 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

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:

1,2,4-trimethylbenzene
benzene
1,3,5-trimethylbenzene
ethylbenzene
isopropylbenzene
toluene
xylene (mixed)
n-propylbenzene
naphthalene
sec-butylbenzene
butylbenzene
benzo(a)pyrene
benzo(a)anthracene
benzo(b)fluoranthene
benzo[k]fluoranthene
chrysene
indeno(1,2,3-CD)pyrene
dibenz[a,h]anthracene
arsenic
barium
cymene

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

- groundwater
- soil

6.2: Interim Remedial Measures

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

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

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

Results of the Investigation to date, by media are summarized in the following:

Soil:
Soil samples were obtained from soil borings/monitoring wells on-site and from some borings/wells located just off of the site boundaries to the north and south from approximately 8 to 12 feet below grade surface (bgs) and from test pits located on-site or within the fence line at 2 to 13 feet bgs. Surface soil samples (0 to 2 inches) were not collected because the site surface consists largely of pavement, broken-up pavement and gravel back-fill material.

Three volatile organic compounds (VOCs) were found at concentrations above the unrestricted use Soil Cleanup Objectives (SCOs). Specifically, 1,2,4-trimethylbenzene at one location approximately 8 to 12 feet bgs at 12 ppm compared to the unrestricted SCO of 3.6 ppm; acetone at five locations at depths ranging from 2 to 12 feet bgs at concentrations ranging from 0.055 to 0.330 ppm compared to the unrestricted SCO of 0.05 ppm; and xylene at six locations at depths ranging from 2 to 14 feet bgs with concentrations ranging from 0.260 to 0.540 ppm compared to the unrestricted SCO of 0.26 ppm.. No VOCs were found at concentrations above commercial use SCOs.

Fourteen semi-volatile organic compounds (SVOCs) were found across the site at concentrations above the unrestricted use SCOs mostly from depths ranging from 4 to 13 feet bgs. These SVOCs are acenaphthene, dibenz (a,h) anthracene, benzo (a) anthracene, fluoranthene, benzo (b) fluoranthene, fluorene, benzo (k) fluoranthene, indo (1,2,3 cd) pyrene ,benzo (a) pyrene, naphthalene, benzo (g,h,i)perylene, phenanthrene, chrysene and pyrene. Seven of these SVOCs benzo (a) anthracene, chrysene, benzo (a) pyrene, dibenz (a,h) anthracene, benzo (b) fluoranthene, indo (1,2,3 cd) pyrene and benzo (k) fluoranthene exhibited concentrations above commercial use SCOs across the site. However, samples collected outside the outer edge of the site boundary did not exceed unrestricted SCOs for site related SVOCs.

Seven metals arsenic, barium, copper, lead, mercury, nickel, and zinc were found above unrestricted use SCOs across the site. Two of these metals (arsenic (2 samples) and barium (1 sample)) were found at concentrations above commercial use SCOs with arsenic at 33 and 21 ppm compared to the commercial SCO of 16 ppm and barium at 660 ppm compared to the commercial use SCO of 400 ppm. Samples collected just outside the outer edge of the site boundary only slightly exceeded the unrestricted SCO for arsenic [13ppm] with a concentration of 14ppm in one sample at 8 to 12 feet bgs.

No polychlorinated biphenyls (PCBs) were detected.

Groundwater:
Groundwater samples were collected from eleven groundwater monitoring wells, nine of which were along or just outside the site boundaries. Sample results indicate that the groundwater is contaminated by VOCs in excess of applicable standards in two on-site wells [near historic source areas] and in two of the perimeter wells located to the west and south of the site. ,. These VOCs are benzene up to 214 parts per billion (ppb) compared to the 1 ppb standard; ethyl benzene up to 404 ppb compared to the 5 ppb standard; isopropyl benzene up to 54 ppb compared to the 5 ppb standard; n-butyl benzene up to 11.6 ppb compared to the 5 ppb standard; n-propyl benzene up to 99.4 ppb compared to the 5 ppb standard; naphthalene up to 111 ppb compared to the 10 ppb standard; p-isopropyl toluene up to 7.54 ppb compared to the 5 ppb standard; sec-butyl benzene up to 8.0 ppb compared to the 5 ppb standard; xylene up to 689 ppb compared to the 15 ppb standard; 1,2,4 trimethylbenzene at 628 ppb compared to the 5 ppb standard; 1,3,5 trimethylbenzene at 176 ppb compared to the 1 ppb standard; and toluene up to 109 ppb compared to the 5 ppb standard .

One SVOC, naphthalene, was found in excess of the guidance value of 10 ppb in the two on-site wells in the site's interior up to 77 ppb but no SVOCs were found in excess of guidance values in the wells located along or just outside the site boundaries.

Metals were found in some of the wells along or just outside the site boundaries above applicable guidance values for antimony, arsenic, chromium, lead, and zinc in excess of their respective guidance values. Arsenic was found up to 33ppb compared to its guidance value of 25 ppb; chromium was found up to 95ppb compared to its guidance value of 50 ppb; lead was found up to 64ppb compared to its guidance value of 25 ppb; and zinc was found up to 240ppb compared to its guidance value of 200 ppb. These metals are attributed to urban fill (e.g. ash), especially along the site's northern property line adjacent to Erie Boulevard which was the former Erie Canal that was abandoned and filled-in-place. Elevated metals may also be attributed to suspended solids in these samples which is supported by the lower concentrations of these metals in samples collected from permanent monitoring wells which are less prone to introduction of solids in the samples.

Soil Vapor:
Soil vapor was not sampled and there are currently no buildings on-site. However based on the results of the soil boring and groundwater investigations there is a potential for on-site soil vapor intrusion into any buildings that may be constructed on-site.

The property across Water Street which is directly south of the site, is the Former Midtown Plaza ERP Site which was redeveloped as the Syracuse University Center of Excellence (COE). Although an assessment of site conditions did not find that a mitigation system was warranted, Syracuse University installed and maintains a soil vapor mitigation system.

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.*

People are not drinking the groundwater because the area is served by a public water supply not affected by site contamination. Currently a fence surrounds the site. Because some contaminated soils remain at the site below the pavement and gravel fill, people will not come into contact with contaminated soils unless they dig below the surface materials. 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. 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. Actions have been implemented to address off-site soil vapor concerns associated with the adjacent Midtown Plaza site building. The potential off-site soil vapor concerns are limited to this one building.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

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 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Cover System with Site Management Plan including Monitored Natural Attenuation remedy.

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

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program.

1. 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. A site cover will be required to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foo of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

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

•requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
•allows the use and development of the controlled property for commercial and industrial as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
•restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
•requires compliance with the Department approved Site Management Plan.

4. A Site Management Plan is required, which includes the following:

An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 3 above.

Engineering Controls: The site cover system discussed in Paragraph 2.

This plan includes, but may not be limited to:

a. 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 water use restrictions; 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 provision for evaluation of the potential for soil vapor intrusion for future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.

c. 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 buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

d. A provision for treating the groundwater if the groundwater monitoring data do not demonstrate significantly reduced total VOC concentrations within two years following remedy construction. Selection of the specific remedial technology will consider the monitoring data, but it is currently anticipated that injection of oxygen releasing compounds (ORC) would be used.