DECISION DOCUMENT

ALCO-Maxon Site - Parcel C
Brownfield Cleanup Program
Schenectady, Schenectady County
Site No. C447044
February 2015

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

DECLARATION STATEMENT - DECISION DOCUMENT

ALCO-Maxon Site - Parcel C
Brownfield Cleanup Program
Schenectady, Schenectady County
Site No. C447044
February 2015

Statement of Purpose and Basis

This document presents the remedy for the ALCO-Maxon Site - Parcel C 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 ALCO-Maxon Site - Parcel C 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 restricted residential 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 two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential 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. In-situ chemical oxidation (ISCO) will be implemented to treat chlorinated solvent contamination in soil and groundwater. A chemical oxidant will be injected into the subsurface to destroy the contaminants in an approximately 22,500 square foot source area located in the center portion of the site where the chlorinated solvents were present at elevated levels in groundwater. The method and depth of injection will be determined during the remedial design.

4. Institutional Control
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 restricted residential, commercial and industrial uses 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.

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

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

Institutional Controls: The Environmental Easement discussed in Paragraph 4 above.

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

This plan includes, but may not be limited to:
•an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
•descriptions of the provisions of the environmental easement including any land use, and groundwater and surface water use restrictions;
•a provision for evaluation of the potential for soil vapor intrusion in the existing on-site building should the building's use or occupancy change and for any 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 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 groundwater to assess the performance and effectiveness of the remedy;
•a schedule of monitoring and frequency of submittals to the Department;
•monitoring for soil vapor intrusion for the existing on-site building or any 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.

February 20, 2015

Date

Robert J. Cozzy, Director
Remedial Bureau B

DECISION DOCUMENT

ALCO-Maxon Site - Parcel C
Schenectady, Schenectady County
Site No. C447044
February 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 repositories:

Schenectady County Public Library
Attn: Marianne Warner
99 Clinton Street
Schenectady, NY 12305
Phone: 518-388-4500

NYSDEC Region 4
Attn: John Strang, P.E.
1130 North Westcott Road
Schenectady, NY 12306

Phone: 518-357-2045

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: This site is 5.45 acres and was part of the former American Locomotive Company property located at 301 Nott Street in Schenectady. ALCO-Maxon Site Parcel C is made up of two parcels. The larger area is adjacent to ALCO-Maxon Site Parcel B (C447043) and the second area is across Erie Boulevard and includes the former Erie Boulevard Power substation.

Site Features: ALCO-Maxon Site Parcel C is currently undeveloped and vacant except for Building 330 (which is currently occupied and used by a third party Steel Manufacturer for painting).

Current Zoning and Land Use: ALCO-Maxon Site Parcel C is currently zoned as C-3 Waterfront Development District. According to the City of Schenectady, the purpose of the C-3 District is to provide unique opportunities for the development and maintenance of water-oriented uses within certain areas of the City adjacent to the Mohawk River. The C-3 District permits certain recreational, open space, business, and residential uses which will generally benefit from and enhance the unique, aesthetic, recreational, and environmental qualities of the waterfront areas. There is one production building (for painting) in use on ALCO-Maxon Site Parcel C. The third party Steel Manufacturer also uses a portion of the site as a materials storage work yard.

Past Use of the Site: The site was used for the manufacture of railroad locomotives and military hardware from 1849 through 1969. Schenectady Industrial Corporation purchased the site in 1971 and General Electric Company occupied the site from 1971 to 1985. Small industrial manufacturing and fabrication companies have occupied various buildings within the site since 1985. Historic activities have resulted in petroleum and chlorinated solvents impacts to the groundwater, soil and soil vapor.

Site Geology and Hydrogeology: The Parcel is underlain by fill that is present across much of the site, varying from 2 to 12 feet. Underlying the fill is a sequence of overburden deposits (sand, silt clay) at a thickness from 5 to more than 25 feet. A silty sand unit overlies a second clay layer (25 to 30 feet below ground surface). Groundwater is measured in the overburden between 2 and 12 feet below ground surface. The groundwater flows north-northwest toward the Mohawk 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 under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

- 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 are:

trans-1,2-Dichloroethene
TRICHLOROETHENE (TCE)
cis-1,2-Dichloroethene
TETRACHLOROETHYLENE (PCE)
VINYL CHLORIDE
Polycyclic Aromatic Hydrocarbons (PAHs), Total

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

- groundwater
- soil
- soil vapor intrusion

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 - On-Site Bldg Demolition

Asbestos abatement and building demolition were completed in 2011 on Buildings 316 and 332. In January 2014 the boundary between ALCO-Maxon Site Parcel B and ALCO-Maxon Site Parcel C was amended. The size of ALCO-Maxon Site Parcel C was decreased to 5.45 acres and the footprint of those former buildings are now located within ALCO-Maxon Site Parcel B.

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.

Summary of Soil Contamination
Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), inorganics, and pesticides/PCBs. Several Polycyclic Aromatic Hydrocarbons (PAHs), used as an indicator of petroleum products, have been measured in surface soil up to 239 parts per million (ppm) which is above the unrestricted use soil cleanup objectives (SCOs). The chlorinated solvent tetrachloroethene (PCE) was measured in sub-surface soil ranging from 9.6 ppm to 627 ppm. There were no pesticides/PCBs detected above unrestricted use SCOs. Arsenic was found above the unrestricted use SCOs in one sample. Site-related soil contamination is not expected to extend off-site based on the available data.

Summary of Groundwater Contamination
Groundwater samples were analyzed for VOCs, SVOCs, inorganics, and pesticides/PCBs. Groundwater at ALCO-Maxon Site Parcel C is impacted by chlorinated solvents (PCE, TCE, cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride). The source of the chlorinated solvent plume is located in ALCO-Maxon Site Parcel C. Chlorinated solvents have been measured in groundwater ranging from 10 to 2,027 parts per billion. Exceedances of the groundwater standards were observed for PAHs in one monitoring well.

Summary of Sub-slab Vapor/Indoor Air Contamination:
Soil vapor is impacted by chlorinated solvent contamination. At ALCO-Maxon Site Parcel C on-site Building 330 had sub-slab and indoor air sampling conducted. The sub slab vapor results indicate that the structure should be mitigated based on the levels of site related contaminants detected, however the building is used to paint steel product and is not otherwise occupied. The indoor air results of the site related contaminants were non-detect. If the use of the building changes, it will be evaluated again for soil vapor intrusion. Of the 6 soil vapor samples collected across ALCO-Maxon Site Parcel C, volatile organic compounds were detected in each sample. PCE was detected in four samples at a maximum concentration of 7,400,000 micrograms per cubic meter (mcg/m3). TCE was detected in two samples at a maximum concentration of 33,000 mcg/m3.

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 will not come into contact with contaminated soil unless they dig or disturb the soil. People are not drinking the contaminated groundwater since the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into 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. Soil vapor intrusion sampling identified impacts in indoor air quality in one on-site building and represents a health concern. Sampling of other on-site buildings for soil vapor intrusion identified a potential concern should their building use or construction change. The potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion in any future on-site building development and occupancy.

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.
- Prevent the discharge of contaminants to surface water.
- 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.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or

impacts from bioaccumulation through the terrestrial food chain.

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 In-Situ Soil and Groundwater Treatment and Site Cover remedy.

The elements of the selected remedy, as shown in Figure 2, 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;
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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).

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

Institutional Controls: The Environmental Easement discussed in Paragraph 4 above.

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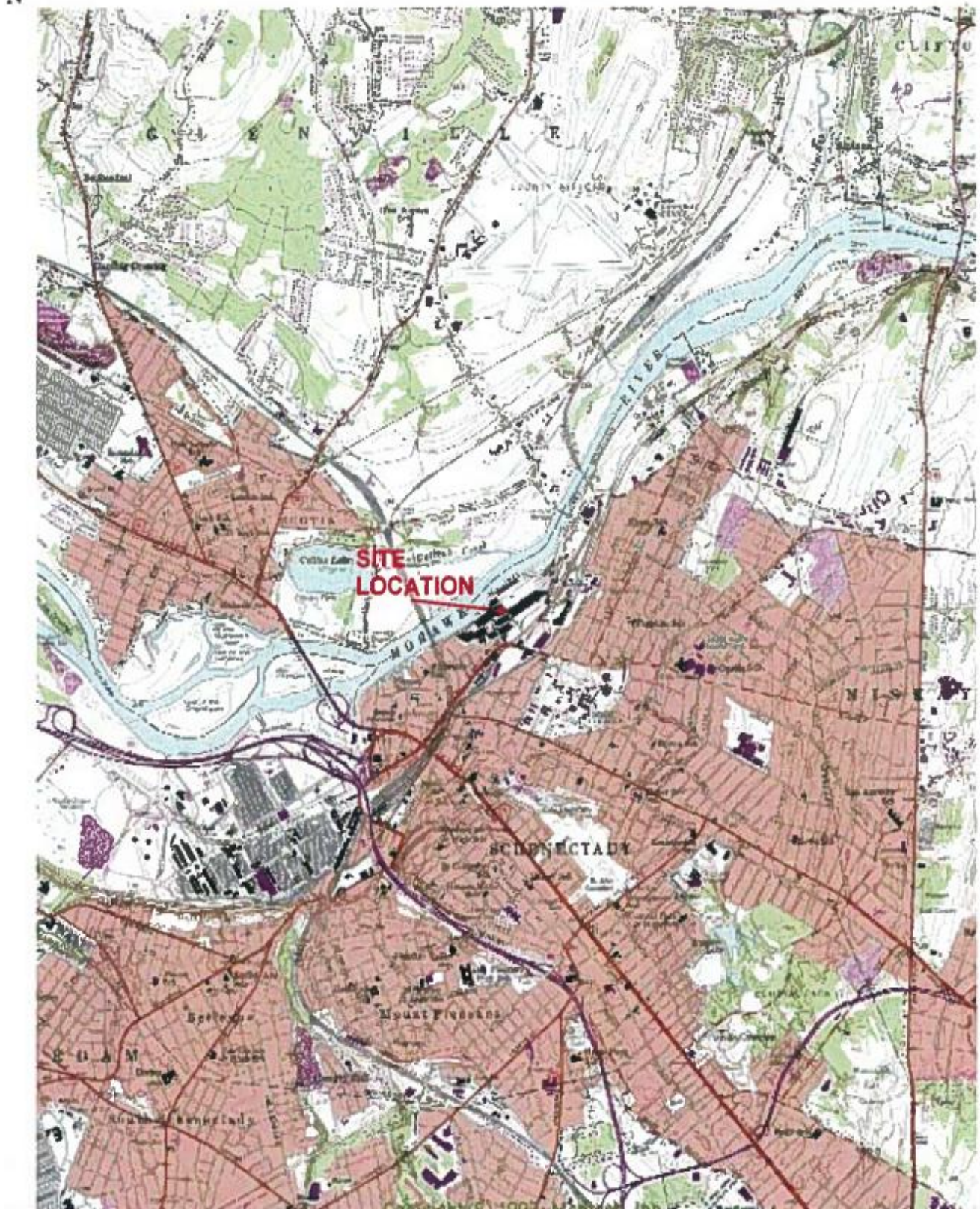
•descriptions of the provisions of the environmental easement including any land use, and groundwater and surface water use restrictions;
•a provision for evaluation of the potential for soil vapor intrusion in the existing on-site building should the building's use or occupancy change and for any buildings 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 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 groundwater to assess the performance and effectiveness of the remedy;
•a schedule of monitoring and frequency of submittals to the Department;
•monitoring for soil vapor intrusion for the existing on-site building or any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



Barton & Loguidice, P.C.

MAXON ALCO HOLDINGS, LLC
SUPPLEMENTAL REMEDIAL INVESTIGATION

SITE LOCATION

SCHENECTADY COUNTY NEW YORK

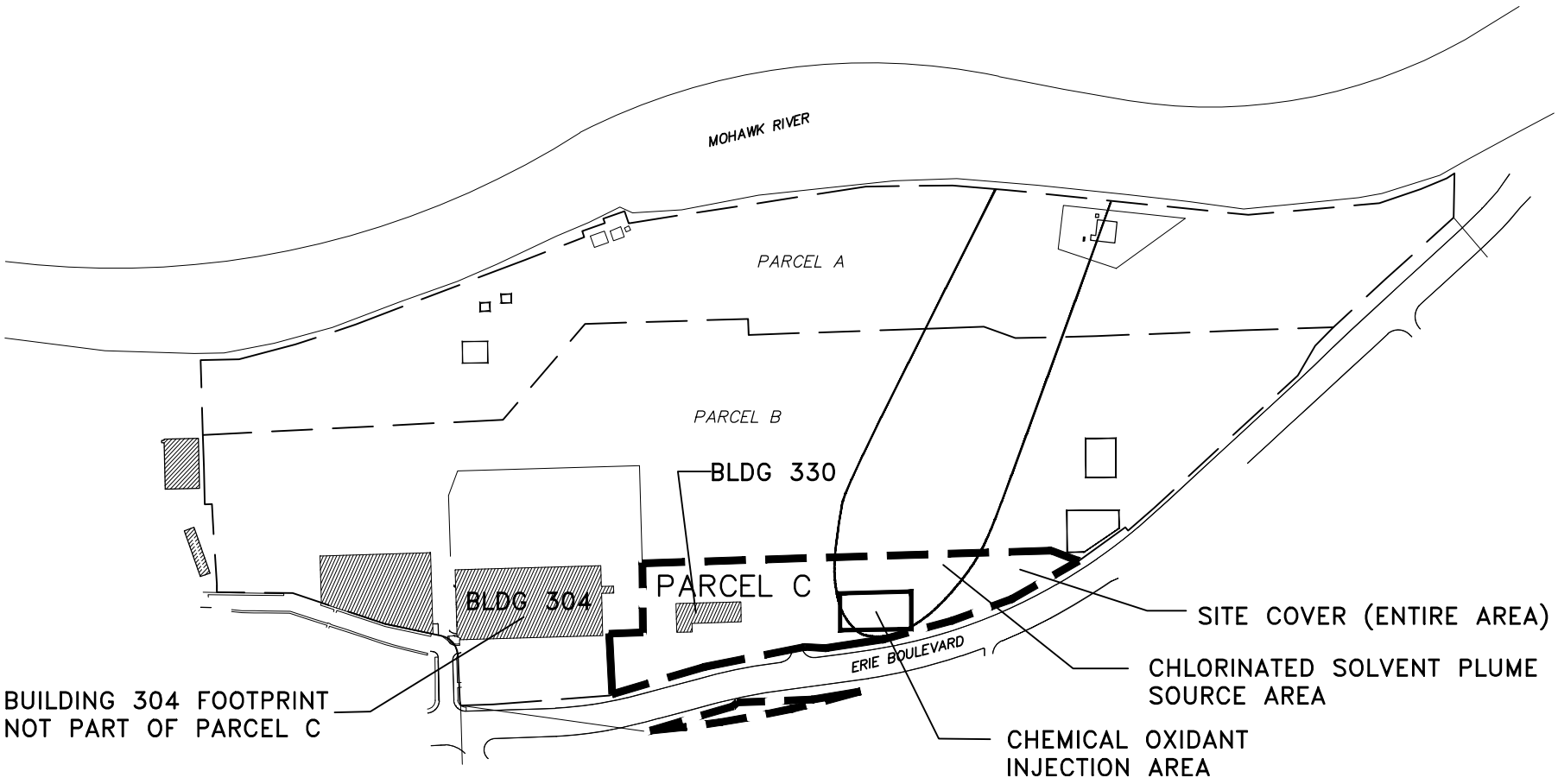
Figure Number
1

Project Number
1368.001.001

Date
OCTOBER, 2013

Scale
NOT TO SCALE

SOURCE LOCATION: Z:\blmfsvr1\...\1368.001.001\Data\Site Plan.ppt



SITE BOUNDARY SHOWN BY BOLD DASHED LINE

LEGEND:

- CHEMICAL OXIDANT INJECTION AREA
- SITE BOUNDARY

Barton & Loguidice, D.P.C.

MAXON ALCO HOLDINGS, LLC
SITE NO. C447044

ALCO–MAXON SITE
PARCEL C

CITY OF SCHENECTADY, NEW YORK

Figure
2
Project No.
1368.001.001
Date
12/16/2014