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*Remedial Action Work Plan (RAWP)*  
*NYS Brownfield Cleanup Program*  
*Site No. C447044 (Parcel C)*

**Former ALCO Site**  
**Brownfield Cleanup Project**

City of Schenectady, Schenectady County, New York

Prepared for

**Maxon ALCO Holdings, LLC**

540 Broadway  
Albany, New York 12207

June 2019

**Barton & Loguidice**

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City of Schenectady  
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Revised June 2019


Prepared for

Maxon ALCO Holdings, LLC  
540 Broadway  
Albany, New York 12207

Prepared by

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*I, the undersigned engineer, certify that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations, and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).*

  
Scott D. Nostrand, P.E.



**TABLE OF CONTENTS**

<u>Section</u>	<u>Page</u>
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>2.0 SITE DESCRIPTION AND HISTORY .....</b>	<b>2</b>
<b>3.0 LAND USE AND PHYSICAL SETTING .....</b>	<b>3</b>
<b>4.0 SITE CONTAMINATION .....</b>	<b>4</b>
4.1 Summary of the Remedial Investigation.....	4
4.1.1 RI Results.....	4
4.2 Summary of Environmental Assessment .....	5
4.3 Summary of Human Exposure Pathways.....	6
4.4 Summary of the Remediation Objectives .....	6
<b>5.0 ELEMENTS OF THE SELECTED REMEDY .....</b>	<b>8</b>
<b>6.0 REMEDIAL DESIGN .....</b>	<b>11</b>
6.1 Design Investigation.....	11
6.1.1 Site-Wide Soil Cover.....	11
6.1.2 Chlorinated Solvent Plume .....	11
6.1.3 Soil Vapor.....	12
6.2 Design of Remedies .....	13
6.2.1 Site-Wide Soil Cover.....	13
6.2.2 Chlorinated Solvent Plume .....	13
6.2.3 Soil Vapor.....	13
<b>7.0 REMEDIAL ACTION IMPLEMENTATION.....</b>	<b>14</b>
7.1 Stormwater Management .....	14
7.2 Institutional Controls .....	14
7.3 Confirmation Sampling .....	14
7.4 Reporting .....	15
7.4.1 Schedule and Progress Reports .....	15
7.4.2 Final Engineering Report.....	15
7.5 Site Management Plan.....	16
<b>8.0 REFERENCES .....</b>	<b>17</b>

**Figures**

- Figure 1. Site Location Map
- Figure 2. Soil Boring Locations
- Figure 3. Preliminary Remedial Action Schedule

## 1.0 INTRODUCTION

Maxon ALCO Holdings, LLC (MAH) entered into Brownfield Cleanup Agreements (BCA) through the New York State Department of Environmental Conservation's (NYSDEC) Brownfield Cleanup Program (BCP) for the property located at 301 Nott Street in Schenectady, New York, identified as the ALCO Site (Property or Site) and historically known as the Nott Street Industrial Park (Park). In 2010, after purchasing the property, the Volunteer (Maxon-ALCO Holdings) divided the Property into three parcels: Parcel A, Parcel B and Parcel C (Site Nos. C447042, C447043, and C447044, see Figure 1) and each Parcel was deemed eligible for the BCP and subject to separate BCAs.

Parcels A and B (Site Nos. C447042, C447043) each achieved Certificate of Completion (COC) in December 2016 with the goal of Parcel C (C447044) achieving COC status in 2019. Parcel C is approximately 5.45 acres and is made up of two parcels. The larger area is adjacent to Parcel B (C447043) and the second area is across Erie Boulevard and includes the former Erie Boulevard Power substation (see Figure 2).

A Decision Document was issued for ALCO Parcel C in February 2015. This Remedial Action Work Plan provides the procedures for implementing the remedial actions described in the Decision Document to achieve a COC.

## 2.0 SITE DESCRIPTION AND HISTORY

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.

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). 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.

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.

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.

### **3.0 LAND USE AND PHYSICAL SETTING**

NYSDEC 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; RI results are summarized in the following section.

## 4.0 SITE CONTAMINATION

### 4.1 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 subsequent sections.

The analytical data collected on this site includes data for:

- Groundwater
- Soil
- Soil Vapor
- Indoor Air
- Sub-Slab Vapor

#### 4.1.1 RI Results

The RI data identified contaminants of concern (COCs). 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
- tetrachloroethene (PCE)
- Vinyl Chloride

- Polycyclic Aromatic Hydrocarbons (PAHs),

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

- Groundwater
- Soil
- Soil vapor intrusion

#### 4.2 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.

Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), inorganics, and pesticides/PCBs. Several Polycyclic Aromatic Hydrocarbons (PAHs), (which are present in coal and coal ash), 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.

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 chlorinated solvent plume originates from an area on ALCO-Maxon Site Parcel C. Chlorinated solvents have been measured in groundwater ranging from 10 to 2,027 parts per billion. Exceedance of groundwater standards were also observed for a limited number of PAHs in one monitoring well.

Soil vapor is impacted by chlorinated solvents. At ALCO-Maxon Site Parcel C onsite Building 330 had sub-slab and indoor air sampling conducted. The sub slab vapor results indicated that mitigation might be appropriate based on the levels of site related contaminants detected; however the building is used to paint steel product and is not otherwise occupied. Moreover, the indoor air results of 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/m<sup>3</sup>). TCE was detected in two samples at a maximum concentration of 33,000 mcg/m<sup>3</sup>.



### 4.3 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 will not come into contact with contaminated soil unless they dig or disturb the soil. People are not drinking the groundwater since the area is served by a public water supply that is not affected by 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. 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 exposure via inhalation to contaminants in indoor air due to soil vapor intrusion in future on-site building development and occupancy.

### 4.4 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. 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.

## 5.0 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 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 6NYCRR 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. (Note: this task was completed in May 2016).
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:
    - The Environmental Easement discussed above.
    - The site cover discussed in 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.

## 6.0 REMEDIAL DESIGN

### 6.1 Design Investigations

During investigations, the Site Manager or designee will conduct air monitoring in accordance with the New York State Department of Health (NYSDOH) Community Air Monitoring Plan. Direct reading instruments will be calibrated in accordance with manufacturer's requirements and the results of the calibration will be documented.

The Community Air Monitoring Plan (CAMP) sets forth the procedures for performing real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area with respect to specific subsurface intrusive activities to be completed in accordance with the site Health and Safety Plan (HASP). The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses, and on-site or nearby workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

Continuous monitoring will be required for all subsurface intrusive excavation activities. Subsurface intrusive activities include, but are not limited to, soil excavation and handling.

#### 6.1.1 Site-Wide Soil Cover

In order to properly apply soil cover, subsequent investigation will be necessitated to determine the extent of the existing cover on site, including depth of existing concrete, pavement, and asphalt. Much of the parcel is currently hard covered with few areas of exposed soils. Existing foundations will need to be assessed to establish whether they are equivalent cover.

A series of Geoprobe borings and/or small backhoe or handheld shovel tests are recommended to characterize depth of cover and mapping of the existing slab on site. Proposed locations are shown on Figure 2. Once the site is fully characterized, a grading plan will be developed, overlaid on existing maps, to ensure proper coverage to achieve remedial goals.

#### 6.1.2 Chlorinated Solvent Plume

A source area for the chlorinated solvent plume was identified in the SRI Report. Because of the location and dimensions of the source area (particularly with respect to

the City of Schenectady sewers), in-situ remediation (chemical oxidation) was employed in May 2016 to degrade the contaminant source area and higher concentration areas of the plume itself on Parcel C (an area of roughly 150' by 150'). This process entailed the injection of a chemical oxidant solution into the subsurface into the contaminated zone, where the chemical oxidant breaks the contaminant down into its constituent components. For a chlorinated compound, the end products are water, carbon dioxide, and chloride ion. The chemical is injected at different depths and locations to ensure that the contaminated zone is fully saturated with the oxidant. The oxidant solution is a mixture of the oxidant, an activator complex, and water. The residual compounds left over after the reactions are conventional groundwater constituents: iron, carbonate, carbon dioxide, chloride, etc.

Monitored natural attenuation (MNA) is used to address the lower concentration portions of the plume that exist on Parcel C. MNA has been recognized by USEPA as an effective means of addressing residual groundwater contamination, particularly after application of remedial measures addressing contaminant source areas (USEPA, 1999). From the standpoint of remediating overall contaminant mass, there are often areas in a contaminant plume where active remedial measures provide minimal or no incremental benefit relative to natural processes, such as biodegradation, sorption, dispersion, volatilization and dilution.

Confirmatory borings are proposed to demonstrate the effectiveness of the initial oxidant injections and determine the need for further treatment. While Figure 2 demonstrates proposed locations, the actual locations and spacing of the borings will be dependent upon the findings in the field; NYSDEC will be consulted on the selection of boring locations. Borings will be initially advanced to a depth of roughly between 30 feet below grade below grade; boring depths will be adjusted dependent upon the findings in the field, in consultation with NYSDEC.

Two soil samples per boring will be collected at the confirmatory boring locations using a MacroCore sampler; soil samples will be submitted to a laboratory for analysis for VOCs by USEPA Method 8260B. In general, the sample locations and depths will be selected to allow for comparison to DER-10 cleanup guidance criteria.

### 6.1.3 Soil Vapor

As part of the SRI, Soil Vapor Intrusion (SVI) studies were completed in Buildings 306 (west of Parcel C) and 330. Six sub-slab vapor analyses were taken, four in Building 306 (since demolished) and two in Building 330, identified as the STS Paint Shop. Exceedances were found for methylene chloride, tetrachloroethene, and trichloroethene. Total detected VOCs ranged from 287 ug/m<sup>3</sup> to 25,476 ug/m<sup>3</sup>.

Five ambient air samples were taken concurrently, four of these in Building 306 and one in Building 330. Exceedance were identified for the following compounds: 4-methyl-2-

pentanone (MIBK), acetone, carbon tetrachloride, ethanol, ethyl acetate, naphthalene, styrene, tetrachloroethene, trichloroethene, 2-propanol, hexachloro-1,3-butadiene, chlorobenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-butanone (MEK), 4-ethyltoluene, ethylbenzene, m&p-xylene, methylene chloride, n-hexane, o-xylene, and toluene. These results were attributed to active industrial operations performed by STS.

Additional remedial investigation is warranted in the area surrounding the Building 330 (Paint Shop) to fully determine the extent of vapor intrusion due to VOC concentrations encountered. Soil vapor implants utilizing a Geoprobe® unit are recommended at a depth of approximately four to five feet. The soil vapor implant installations will consist of temporary probes constructed of polyethylene tubing installed in the holes and porous, inert backfill material (e.g., coarse sand or glass beads) will be installed in the annular space between the tubing and ground. The implant will then be sealed to prevent the infiltration of ambient air into the sampling probe by installing bentonite in the annular space between the tubing and the ground surface. The length of tubing extending above the ground surface will be sufficient to allow easy attachment to vapor monitoring devices and/or sample canisters.

In total, the field work is anticipated to last two days, which should allow for roughly 22 total borings, broken down into nine characterizing borings, six injection confirmatory borings, and six soil vapor implants. The total number of borings will be determined by the findings in the field, in consultation with NYSDEC.

## 6.2 Design of Remedies

### 6.2.1 Site-Wide Soil Cover

As discussed earlier, a soil cover (with a geotextile demarcation layer) will be designed to address AOC 3; the use of a soil cover is specifically discussed in DER-10 Section 4.1 (f) to mitigate impacted surficial soils, particularly where soil impacts are low level and widespread. A soil cover has been used on other parts of the former ALCO site (Parcels A and B, former Big N Plaza and former Ramada Inn sites). One to two feet of clean soil cover, depending upon the commercial and/or restricted residential use of the property, will be applied. The design for the soil cover will incorporate appropriate features for management and control of storm water; the design may also incorporate grading and areas of thicker soil cover to accommodate future site development.

### 6.2.2 Chlorinated Solvent Plume

A remedial program has been developed for the chlorinated solvent plume, including injections and MNA. Data from the confirmatory borings into the plume will determine the need for additional in-situ oxidant injections.



### 6.2.3 Soil Vapor

Soil vapor investigations should include further sub-slab investigation of the Paint Shop (Building 330) including soil samples and vapor implants. Once the extent of the SVI is further characterized, a remedial plan will be developed according to future use plans for the site. Options for mitigating vapor intrusion include capping of existing site soils, soil vapor extraction, slab/foundation sealing technologies and sub-slab depressurization. The installation of a site-wide soil cover (capping) will also mitigate the potential for vapor intrusion. Additionally, building construction can incorporate the slab/foundation sealing technologies, and/or sub-slab depressurization. These alternatives will be considered in conjunction with other alternatives as part of the remedy.

## 7.0 REMEDIAL ACTION IMPLEMENTATION

### 7.1 Stormwater Management

A Stormwater Pollution Prevention Plan (SWPPP) has already been prepared for the ALCO site for the stockpiling of clean soils for the soil cover used on Parcels A and B. If necessary, the SWPPP will be updated as needed to address the movement and placement of the stockpiled soils and the creation of the clean soil cover for Parcel C.

### 7.2 Institutional Controls

As defined in DER-10, an institutional control (IC) “means any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness and/or integrity of site management activities at or pertaining to a site”. Because of the existing and intended future use of the site, ICs will be implemented as per the SMP for site soils and for future redevelopment of the properties.

The ICs for the site cover the following issues and will be found in detail in the SMP:

- A requirement that a clean soil cover of a minimum thickness of one to two feet, depending upon the actual commercial or restricted-residential use, be maintained on the site
- Notification to be filed with the property deed that residually-impacted soils are present below the clean soil cover
- A requirement that any excavation below the clean soil layer entail notification to contractors of the potential hazard, and restoration of the clean soil layer
- A prohibition on the installation of potable water wells on the property.

### 7.3 Confirmation Sampling

Sampling is anticipated as part of the remedial actions associated with the chlorinated solvent plume and soil vapor intrusion. As discussed previously, soil samples and additional below ground surface air samples will be taken concurrently.

A separate work plan will be prepared and submitted to describe this work.

## 7.4 Reporting

### 7.4.1 Schedule and Progress Reports

A preliminary Remedial Action Schedule has been prepared and is included as Figure 3. Per DER-10 Section 5.7, the Remedial Action Schedule includes:

- Dates for submission of deliverables
- Timeframes for contractor procurement
- Timeframes for review of deliverables by NYSDEC
- Timeframes for application/issuance of permits, if needed
- Timelines for developing access agreements or easements
- Timelines for the preparation of the Site Management Plan and the Final Engineering Report

The Remedial Action Schedule will be updated periodically to reflect progress and/or changes in the Remedial Action Implementation Program. Also per DER-10 Section 5.7, a monthly progress report will be prepared and submitted to NYSDEC during the Remedial Action Implementation phase. The progress report will contain the following, at a minimum:

- Project progress and significant activities
- Pending/planned significant activities in the next two months
- Updated project schedule
- Discussion of project problems and/or delays
- Proposed corrective actions, if needed
- Additional pertinent information

### 7.4.2 Final Engineering Report

Per DER-10 Section 5.8, a Final Engineering Report will be prepared following completion of the Remedial Action activities and will contain:

- Signature page, stamped by a licensed NYS Professional Engineer
- A description of the remedy, as constructed
- A summary of the remedial actions completed
- Listing of the remedial action objectives
- Supporting tables and figures
- Detailed description of remedial action compliance
- As-built drawings

- Identification of institutional controls and environmental easements
- Appropriate supporting figures for groundwater remediation

#### 7.5 Site Management Plan


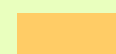
A Site Management Plan will be prepared and submitted per DER-10 Section 6.2. The plan will contain, at a minimum, the following elements:

- Institutional and Engineering Control (IEC) Plan
  - Excavation plan for future development work
  - Clean soil importation plan
  - Soil vapor mitigation plan for future development work
  - Soil cover maintenance and inspection plan
  - Health and safety plan
- Monitoring Plan
  - Groundwater Monitoring
    - § Natural attenuation
    - § Plume management
    - § Health and safety
- Operation and Maintenance (O&M) Plan
  - Soil cover maintenance and inspection plan
  - Health and safety plan

**FIGURE 1**  
**Site Location Map**




**Legend**

-  Parcel C
-  ALCO Site

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



  
1 inch = 300 feet

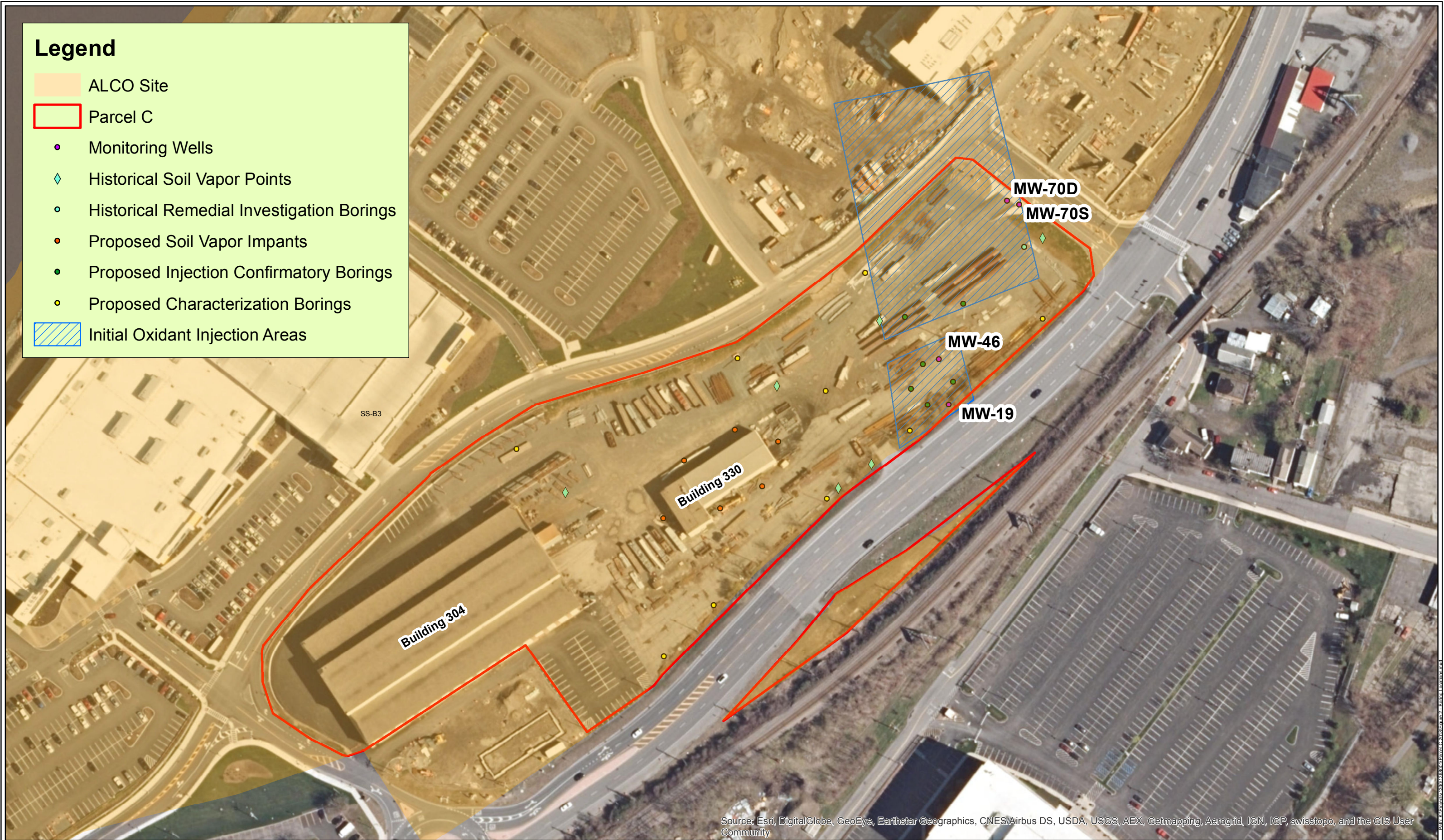
ALCO-Maxon Holdings  
**Site Location Map**  
Schenectady County 11/8/2018 New York

Figure  
1  
Project  
No.  
1368.001

**FIGURE 2**  
**Soil Boring Locations**

# Legend

- ALCO Site
- Parcel C
- Monitoring Wells
- Historical Soil Vapor Points
- Historical Remedial Investigation Borings
- Proposed Soil Vapor Impants
- Proposed Injection Confirmatory Borings
- Proposed Characterization Borings
- Initial Oxidant Injection Areas



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



1 inch = 125 feet



**FIGURE 3**  
**Preliminary Remedial Action Schedule**

REMEDIAL ACTION SCHEDULE  
ALCO - PARCEL C - C447044

ID	Task Name	Duration	Start	2020													
				Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan		
1	RAWP Submittal	0 days	Mon 2/25/19	◆ 2/25													
2	RAWP Approval	0 days	Mon 6/10/19					◆ 6/10									
3	Remedial Design Field Work	15 days	Mon 6/3/19														
4	Remedial Design Preparation	30 days	Mon 6/10/19														
5	Remedial Design Approval	0 days	Tue 7/30/19														
6	Remedial Construction	35 days	Mon 8/5/19														
7	Preparation of Draft FER	10 days	Mon 8/19/19														
8	Delivery of Draft FER	0 days	Tue 10/15/19														
9	Delivery of Final FER	0 days	Fri 11/15/19														
10	Construction Completion (incl. soil cover)	0 days	Mon 9/30/19														
11	SMP Preparation	5 days	Mon 8/12/19														
12	Delivery of Draft SMP	0 days	Wed 10/2/19														
13	Delivery of Final SMP	0 days	Sun 11/3/19														
14	Preparation of EEs	13 days	Mon 7/1/19														
15	Delivery of EEs	0 days	Wed 10/23/19														
16	COC Issuance	0 days	Sun 12/1/19														

*The experience to*  
**listen**  
*The power to*  
**solve**<sup>SM</sup>

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