NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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November 25, 2016

Maxon ALCO Holdings, LLC
Attn: Mr. David Buicko
695 Rotterdam Industrial Park
Schenectady, NY 12306

Re: ALCO-Maxon Site – Parcel A, BCP Site No. C447042, Schenectady
ALCO-Maxon Site – Parcel A Site Management Plan Approval

Dear Mr. Buicko:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health have received the revised ALCO-Maxon Site – Parcel A Site Management Plan (SMP) dated 11/09/16. As the submitted plan has addressed all the Department's comments (9/21/16 and 11/04/16) the SMP is hereby approved.

The 11/09/16 SMP is to be inserted as Appendix A in the draft Final Engineering Report which is under development. I may be reached at (518) 357-2390 or by email at john.strang@dec.ny.gov for any questions.

Sincerely,
John R Strang

John R. Strang, PE.
Environmental Engineer 2
Division of Environmental Remediation
Region 4

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ALCO-Maxon Site – Parcel A
Schenectady County
City of Schenectady, New York

ALCO-Maxon Site - PARCEL A SITE MANAGEMENT PLAN

NYSDEC Site Number: C447042

Prepared for:
Maxon ALCO Holdings, LLC
695 Rotterdam Industrial Park
Schenectady, NY 12306

Prepared by:
Barton & Loguidice, Inc.
10 Airline Drive, Suite 200
Albany, New York 12205

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

NOVEMBER 2016

CERTIFICATION STATEMENT

I, the undersigned engineer, certify that I am currently a NYS registered professional engineer and that this Site Management 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.

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List of Acronyms

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan C/D Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO_2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization

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List of Acronyms (continued)

SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

Executive Summary

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

Site Identification: ALCO-Maxon Site – Parcel A
NYSDEC Site Nos. C447042
City of Schenectady, New York

Institutional Controls:	• The property may be used for: restricted residential use; • All ECs must be operated and maintained as specified in this SMP; • All ECs must be inspected at a frequency and in a manner defined in the SMP. • The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Schenectady County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department. • Groundwater and other environmental or public health monitoring must be performed as defined in this SMP; • Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP; • All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP; • Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP; • Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP; • Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement. • The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any impacts that are identified must be monitored or mitigated; • Vegetable gardens and farming on the site are prohibited; • Appropriate clean soil cover of a minimum thickness of two feet, due to

	the restricted-residential use, must be maintained on the site; • The Site Management Plan must note that residually-impacted soils are present below the clean soil cover; • Excavation below the clean soil layer entail requires: 1) 15 day prior notification to NYSDEC and NYSDOH, 2) notification to contractors of the potential hazard (contractor personnel may be subject to 29 CFR 1910.120 – HAZWOPER), and 3) restoration of the clean soil layer Development of a Flood Hazard Mitigation Plan to comply with Chapter157 –Flood Hazard Control of the City of Schenectady Code, as the ALCO site lies within FEMA mapped Zones A-16 and B; • Develop a Soil Vapor Mitigation Plan to guide future building construction; and • Develop a Groundwater Monitoring Plan to document improving groundwater quality in response to remediation activities.
Engineering Controls:	1. Cover system • Appropriate clean soil cover of a minimum thickness of two feet, due to the restricted-residential use, must be maintained on the site; • The Site Management Plan must note that residually-impacted soils are present below the clean soil cover; • Excavation below the clean soil layer entail requires: 1) 15 day prior notification to NYSDEC and NYSDOH, 2) notification to contractors of the potential hazard (contractor personnel may be subject to 29 CFR 1910.120 – HAZWOPER), and 3) restoration of the clean soil layer Development of a Flood Hazard Mitigation Plan to comply with Chapter157 –Flood Hazard Control of the City of Schenectady Code, as the ALCO site lies within FEMA mapped Zones A-16 and B; • The Excavation Work Plan (EWP) provided in Appendix D outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix E. 2. Monitoring Wells associated with Monitoring Attenuation 3. Monitoring Wells associated with Spill 1604483

Inspections:	Frequency*
Cover inspection	Annually
Mohawk River (spill 1604483)	Weekly
Monitoring:	
1. Harbor Sediment	Annually
2. Groundwater Monitoring Wells 62, 64S, 64D, 65, 71, 72, and 73	Quarterly
3. Harbor Surface Water	Annually
4. Soil Vapor Intrusion	Annually
Reporting:	
Groundwater Monitoring Well Data	Semi-Annually
Periodic Review Report	Annually

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 Introduction

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the ALCO-Maxon Site – Parcel A located in the City of Schenectady, New York (hereinafter referred to as the "Site"). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), which is administered by New York State Department of Environmental Conservation (NYSDEC).

Maxon ALCO Holdings, LLC (MAH) entered into Brownfield Cleanup Agreements (BCA) through the NYSDEC's BCP for the property located at 301 Nott Street in Schenectady, New York, identified as the ALCO 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,) and each Parcel was deemed eligible for the BCP and subject to separate BCA's. In November of 2013, MAH proposed the reconfiguration of Parcels B and C to NYSDEC to more efficiently proceed with potential Interim Remedial Measures and redevelopment planning; the proposed reconfiguration was approved by NYSDEC in the first half of 2014. Additional reconfiguration of the Parcels have been made through BCA Amendments approved by the NYSDEC.

A figure showing the site location and boundaries of this site is provided in Figure 2. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A.

After completion of the remedial work, residual contamination was left at this site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Schenectady County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Site No. C447042) for the site, and all reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix B of this SMP.

This SMP was prepared by Barton & Loguidice, Inc. (B&L), on behalf of Maxon ALCO Holdings, LLC in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May, 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions

Revisions to this plan may be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Brownfield Cleanup Agreement (BCA, and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Notifications*	
Name	**Contact Information**
NYSDEC Project Manager	518-357-2045
NYSDEC Regional HW Engineer	518-357-2045
NYSDEC Site Control Section	518-402-9569
NYSDOH Project Manager	518-402-7860

*Note: Notifications are subject to change and will be updated as necessary.

2.0 Summary of Previous Investigations and Remedial Actions

2.1 Site Location and Description

The site is located at 301 Nott Street, Schenectady, New York. The site consists of three adjacent parcels (see Figure 2):

- Parcel A is approximately 19.15 (October 2016) acres and was part of the former American Locomotive Company property located at 301 Nott Street, Schenectady, NY 12306. Parcel A has the Mohawk River as its northern border and is adjacent to Parcel B (C447043).
- Parcel B is approximately 30.62 (August 2016) acres and was part of the former American Locomotive Company property located at 301 Nott Street in Schenectady. This Parcel lies between Parcel A (C447042), that is adjacent to the Mohawk River, and Parcel C (C447044), which is adjacent to Front Street and Erie Boulevard.
- Parcel C is approximately 6.01 (August 2016) acres and was part of the former American Locomotive Company property located at 301 Nott Street in Schenectady. Parcel C 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.

The Site is located in an area of mixed uses, including a mixture of residential, commercial and industrial uses. Neighboring property uses are summarizes as follows:

The Site is bordered to the north by the Mohawk River. North of the Mohawk River, there are large tracks of vacant and agricultural land as well as residential neighborhoods comprised of detached single family dwellings and apartment buildings. Commercial land uses such as a restaurant, marina, auto body/tire shops, storage, warehousing, and distribution facilities, multiple use structures and industrial land uses such as outdoor tank storage facilities also exist near Freemans Bridge Road.

The Site is bordered to the east by Erie Boulevard. Land use beyond Erie Boulevard consist of commercial and industrial uses, which include office, storage, warehouse and distribution facilities, and manufacturing and assembly. The D&H Railway right-of-way also serves as a major land use. Uses become more residential in nature south of the rail line. It is noted that, prior to the construction of Erie Boulevard, the former ALCO facility once extended approximately 1000 feet east of the present site boundary. Further to the south, the Site is bordered by Erie Boulevard, Nott Street and Front Street. Further to the southwest is a parking lot and commercial businesses.

The Site is bordered to the west by the East Front Street Neighborhood. The neighborhood consists of a mix of residential (one, two, three and multi-family residences), industrial, and commercial buildings. Specific uses found within the neighborhood include

businesses such as taverns, an antique store, a locksmith, food sellers, a florist, a bowling alley, a technology company, and a car wash. A former railroad abutment separates the neighborhood from the Mohawk River. The Historic Stockade District exists east of the East Front Street neighborhood. The Historic Stockade District is primarily residential with a few commercial establishments, churches, and Riverside Park. Residential buildings include one, two, and three family homes, apartments, and multipurpose residences.

The boundaries of the site are more fully described in Appendix A - Environmental Easement. The owner of the site parcels at the time of issuance of this SMP is Maxon ALCO Holdings, LLC.

2.2 Physical Setting

2.2.1 Land Use

The City of Schenectady adopted its new Zoning Ordinance (Chapter 264) on March 24, 2008. The ALCO Site is zoned C-3 Waterfront Development District. 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.

The former industrial site is serviced by municipal water and sewer and currently has commercial tenants on a limited portion of the property along Front Street and is otherwise unoccupied with the vacant structures being demolished in 2011. The intended future use of Parcel A is restricted-residential. The ALCO-Maxon Site-Parcel A is zoned C-3 Waterfront Development District. The purpose of the C-3 designation 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.

2.2.2 Geology

The Site is underlain by a unit of fill that is present across much of the Site, varying from a minimum depth of 2 feet to a maximum depth observed during the RI of 12.4 feet. In general, the fill material consists of reworked soil (e.g., silt, sand, gravel, and clay) with lesser amounts of brick, concrete, ash/cinders, slag, metal, wood/organics, and glass. Underlying the fill is a sequence of overburden deposits (sand, silt clay) at a thickness from 5 to more than 25 feet. In locations where the fill unit is generally thinner, a fine to coarse grained sand unit of limited thickness is present beneath the fill. A silty sand unit overlies a second clay layer (25 to 30 feet below ground surface).

2.2.3 Hydrogeology

Based on the groundwater contours, it is apparent that groundwater flow across the majority of the subject Site is to the North towards the Mohawk River (Class A rated). The horizontal hydraulic gradient from south to north across the Site (i.e. from MW-19 to MW-65) is approximately 0.006 ft./ft. Groundwater is measured in the overburden between 2 and 12 feet below ground surface. Parcel A is located directly adjacent to the Mohawk River. The site is serviced by municipal water and sewer.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 - References.

The results of the site investigations relative to the Brownfield Cleanup Program are described in detail in the following reports:[1]

- "Remedial Investigation Report" prepared by CHA dated August 2012
- "Supplemental Remedial Investigation Report" prepared by B&L dated October 2013
- "Alternatives Analysis Report" prepared by B&L dated February 2014

2.3.1 Site History

The Schenectady Locomotive Engine Manufactory initially developed a portion of the existing site in 1849. In 1851, the company changed its name to Schenectady Locomotive Works (Works) and continued to develop the Site. In 1901, the Works merged with several other companies to form the American Locomotive Company (ALCO). ALCO operated the Site until 1969. Schenectady Industrial Corporation (SIC) purchased the Nott Street Industrial Park (NSIP) in 1971, with General Electric Company (GE) occupying the Park from 1971 to 1985. Small industrial, manufacturing and fabrication companies have occupied various buildings within the NSIP since 1985, when occupancy of buildings was returned to SIC.

During April 1992, Coyne Textile Services (CTS), with operations on Front Street, adjacent to the ALCO Site, had a fuel oil release that partially leaked into the municipal storm drain sewer system which flows under the Site, discharging to the Mohawk River at the College Creek Outfall. During inspection of this release, the NYSDEC reportedly observed petroleum seeping from riprap along the bank of the Mohawk River adjacent to Buildings 320 and 324. The NYSDEC requested that a subsurface investigation be performed onshore adjacent to the petroleum seep areas. Following this release, SIC entered into an Order on Consent (OC), (Index No. R4-1338-92-05), with the NYSDEC.

[1] It is noted that prior to the BCP there were substantial investigations and interim remedial measures implemented at the property with DEC oversight.

In 1992, SIC performed a subsurface investigation that included advancing a series of five hand-excavated test pits, (TP-A1 through TP-E1), along the riverbank. Soil analytical results indicated total petroleum hydrocarbon (TPH) concentrations up to 12,000 parts per million (ppm). Following these results, two deep soil borings and five shallow soil borings were advanced adjacent to the test pits. The five shallow soil borings were completed at groundwater monitoring wells. Free-phase petroleum was found in two wells and the free-phase petroleum in one well was found to contain trace levels of polychlorinated biphenyls (PCBs). Groundwater analytical results indicated TPH concentrations ranging from 4.6 ppm to 32,200 ppm. Volatile organic compound (VOC) concentrations were detected.

Historically there have been many environmental investigations completed at the former ALCO Site since the initial investigation in 1992. These investigations, some of which were conducted in conjunction with NYSDEC oversight, have taken place across the ALCO-Maxon Site, which has been separated into Parcels A, B and C. In addition to the environmental investigations conducted throughout the former ALCO Industrial property, underground storage tank (UST) removals and remedial activities have been completed on the ALCO-Maxon Site parcels.

Due to the historic industrial impacts identified on the ALCO Site and subsequent to the execution of a BCA, three Remedial Investigation Work Plans (one for each parcel) were prepared by Kleinfelder, Inc. (KLF) and submitted to NYSDEC on May 24, 2010. The Work Plan outlined the procedures and protocols that were to be utilized to conduct a full-scale remedial investigation that would provide the necessary field data to further delineate the nature and extent of contamination at the subject Site. The Work Plan was prepared to conform to the Draft DER-10 *Technical Guidance for Site Investigation and Remediation* issued by the Division of Environmental Remediation (December 2002). The RI Work Plans for Parcels B and C were subsequently approved by the NYSDEC on June 23, 2011. One of the comments received by the NYSDEC was a request for sampling of both the riverbank and Mohawk River sediments adjacent to the Site. Following the submission of a Work Plan Addendum on January 10, 2012, the RI Work Plan for Parcel A was approved by the NYSDEC on January 23, 2012.

The RI was completed in the first half of 2012, and the RI Report (prepared by CHA) was submitted to NYSDEC in August 2012. Though a separate Work Plan was prepared for each Parcel, the Remedial Investigation (RI) Report covered the entire Site since remedial decision making will include activities that involve multiple parcels on the ALCO Site.

Specifically, the objectives of the RI were to:

- Supplement the historic investigations that have been conducted on the Site,
- Further identify source(s) of contamination,
- Define the nature and extent of that contamination,
- Assess the impact of contamination on public health or the environment, and
- Provide information for the development and selection of a remedial work plan across all parcels (A, B, and C) that make up the ALCO property.

The RI Report also provided a qualitative human health exposure assessment. An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is not documented.

2.3.2 Summary of Remedial Investigation Findings

The results of the exposure assessment from the 2012 remedial investigations indicated that there is currently one complete potential exposure pathway identified:

- Potential exposure of current tenants of Buildings 306 and 330 to VOCs in indoor air through inhalation.

The following potential exposure pathways were identified:

- Exposure of future on-Site workers, residents, site occupants to soil, groundwater, soil vapor or Light Non-Aqueous Phase Liquid (LNAPL) that may be contaminated with VOCs, SVOCs, and/or metals during future intrusive activities at the Site. Routes of exposure to future on-Site workers could include inhalation, ingestion, dermal contact, eye contact, and puncture/injection.
- Exposure to groundwater that may be contaminated with VOCs, SVOCs, and/or metals if groundwater wells are installed and used for drinking water, etc.

By letter dated December 14, 2012, NYSDEC provided comments on the RI Report; general comments were provided for site-wide issues, and comments specific to each parcel were also provided. The comment letter indicated that no further investigation was required for a majority of the areas/issues that were addressed by the RI.

The following is a summary of site conditions when the RI was performed in 2012:

2.3.2.1 Surface Soil

The analytical results from the RI indicate that there are not VOC or Polychlorinated Biphenyl (PCB) impacts to surface soil at the Site. These results are consistent with results from previous investigations. There are residual SVOC detections in surface soils at concentrations below Part 375 Site Clean-up Objectives (SCOs), and only limited areas that exceed Part 375 SCOs. The presence of certain VOC and SVOC Tentatively Identified Compounds (TICs) suggest that degradation/breakdown of historic aged petroleum has and/or is occurring across the Site. Lastly, there are limited, isolated areas of arsenic, lead, and/or mercury that slightly exceed Part 375 SCOs.

In their letter or 12/14/12, NYSDEC concurred with the findings of the RI report on surface soils, and requested limited soil removal activities to address relatively small areas where Part 375 SCOs were exceeded for arsenic, lead, and/or mercury. The NYSDEC also indicated that use of a site-wide soil cover would be an acceptable remedial option to address residual impacts in surface soils.

2.3.2.2 Subsurface Soil

Analytical results for samples collected from the upper fill/sand unit suggest that there are no significant VOC impacts and only limited SVOC impacts to unsaturated soils. Within the unsaturated zone, the area of highest SVOC concentrations is present in the area just west of Building 308, the area located just south of Building 320, beneath the slab of Building 320, and the area between Buildings 316 and 332.

Based on the analytical results for soil samples that were collected from test pits as part of the RI and from previous investigations, there is no evidence of any PCB or metal impacts to subsurface soils across the Site.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on subsurface soils. The NYSDEC also indicated that use of a site-wide soil cover would be an acceptable remedial option to address residual impacts.

2.3.2.3 Groundwater

The results obtained during the RI confirm the detection of a historic chlorinated solvent plume, which appears to originate upgradient from, or in the vicinity of MW-19, and extends over 1,200 feet in length towards the Mohawk River. The historic condition appears to be relatively narrow and it well-delineated to the east, south and west. The depth of the plume is relatively shallow (~20 feet bgs) in the vicinity of monitoring well MW-19 and temporary monitoring well TMW-19C and deepens to approximately 50 to 70 feet bgs along the length of the plume. The data confirms that natural degradation is occurring based on the presence of PCE and TCE breakdown products.

The only other areas with impacts to groundwater are those with relatively localized SVOC (PAH) detections that are generally associated with former UST areas or free product recovery areas. However, a comparison of analytical results from this and from previous investigations suggests that historic contaminant concentrations have generally decreased, with few exceptions. The presence of TICs in most wells across the Site, consisting primarily of petroleum-related compounds, reflect that degradation/breakdown of historic, aged petroleum has occurred in groundwater across the Site.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on groundwater, indicating that no further investigation was necessary. NYSDEC indicated that they would be providing comments on the delineation tasks that were proposed in the RAWP for the chlorinated solvent condition; these tasks were re-proposed in the Supplemental Remedial Investigation Work Plan.

2.3.2.4 Soil Vapor Summary

There is a vapor impact to the subsurface at the southern edge of the Site located just north of Erie Boulevard. The subsurface in this area is primarily impacted by chlorinated VOCs related to the underlying chlorinated solvent groundwater condition. There are also chlorinated VOC impacts to subsurface soil vapor in a limited area between Buildings 346 and 324 and in the southwestern-most portion of the Site between Buildings 306 and 308. There are various but

minor impacts to subsurface soil vapor from petroleum-related compounds; however, the detections do not indicate the presence of any significant petroleum source for soil vapor contamination.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on soil vapor, and requested soil vapor intrusion (SVI) evaluation in three on-site buildings. The proposed SVI work was presented in the Supplemental Remedial Investigation Work Plan.

2.3.2.5 Riverbank Soil Summary

The analytical results from this RI confirmed that there are no VOC or PCB impacts to soils on the bank of the Mohawk River that runs parallel to the Site, generally consistent with results from previous investigations. Impacts from SVOCs to the riverbank of the Mohawk River associated with the Site are generally limited to areas where historic operations took place, in the immediate vicinity of Buildings 326, 324 and 322.

Based on the results obtained during the RI and the previous remedial measures undertaken, minor detections of inorganics (mainly iron, arsenic, mercury and lead) in riverbank soils appear to also be limited to the western portion of the riverbank that runs parallel to the Site (west of College Creek Outfall). The eastern portion of the riverbank has only limited detections of metals (arsenic and lead) slightly above Part 375 SCOs in the area north of Building 346.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on riverbank soils, and requested limited soil removal activities to address a relatively small area where Part 375 SCOs were exceeded for arsenic and lead. The NYSDEC also indicated that use of a site-wide soil cover would be an acceptable remedial option to address residual impacts in riverbank soils.

2.3.2.6 River Sediment Summary

Collectively, the RI noted detectable concentrations of historic industrial related compounds present in Mohawk River sediments both adjacent to the Site and upstream from the Site. The data indicate that an up-gradient source of chlorinated VOCs impacted up-gradient river sediments, but the impacts are relatively localized. There do not appear to be any VOC impacts to sediment immediately adjacent to the site. SVOC impacts are evident upstream and adjacent to the western-most portion of the site (i.e. in the Building 320 area to the east) and suggest that an up-gradient SVOC source is, or was, also present. There are no PCB impacts to the river sediments. The results also indicate that sediments both adjacent to the Site and upstream from the Site have detectable concentrations of metals. The Site is not causing significant adverse inorganic impacts to river sediments.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on river sediments samples, and determined that the Fish and Wildlife Resources Impact Analysis (FWRIA) has been satisfied and no further investigation or information is needed.

2.3.3 Summary of Supplemental Remedial Investigation Findings

In January 2013 Barton & Loguidice prepared a Supplemental Remedial Investigation Work Plan (SRI-WP) to provide the procedures for conducting the NYSDEC requested follow-up work. In follow-up discussions with the NYSDEC, there was concurrence that the design investigation tasks proposed in the Remedial Work Plan (RWP) should be combined with the requested follow-up RI work, as the tasks were 1) similar in nature, and 2) needed to be performed prior to the Remedial Design (RD). The tasks performed during the Supplemental Remedial Investigation are summarized below:

Tasks Requested in the NYSDEC 12/14/12 Letter and Follow-up Discussion:

- Follow-up investigation on the geophysical investigation in identified areas
- Soil Vapor Intrusion investigation in the identified buildings
- Installation of three monitoring wells between Buildings 306-320
- Inspection of Buildings 308 Trench
- Borings in the MW-36 Area (AOC 1A)

Tasks Proposed in the Remedial Work Plan (RWP):

- Chlorinated Solvent Plume Source Investigation (AOC 2)
- Chlorinated Solvent Plume Delineation (monitoring wells) (AOC 2)
- Monitoring well in the MW-45 Area (AOC 1B)

The SRI activities included the installation of soil borings, monitoring wells, soil vapor monitoring points, and test pits along with the collected of subsurface soil, soil vapor, and groundwater to further characterize the site. The SRI activities were completed during the period from May through August 2013. Field activities were conducted in general accordance with NYSDEC protocols (including DER-10), the Remedial Action Work Plan (Kleinfelder, Inc., 2010), and the Supplemental Remedial Investigation Work Plan (Barton & Loguidice, 2013). The data gathered was consistent with prior site investigation information.

2.3.3.1 Parcel A SRI Findings

- NAPL was detected in two of the three monitoring wells installed around MW-45; NAPL thicknesses varied from roughly one inch in MW-47 to roughly one foot in MW-48.
- Concentrations of chlorinated VOCs in Parcel A monitoring wells sampled ranged from 136 µg/L to 3082 µg/L.

2.3.3.2 Site-Wide Groundwater Quality

- Monitoring wells installed on Parcels A, B and C provided further delineation of the chlorinated solvent plume, which migrates across the three parcels along the established groundwater flow gradient.

- The source area for the chlorinated solvent plume was identified and delineated in an area of Parcel C around soil vapor point SV-C9.

2.3.4 Summary of 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) have been completed for the Site Parcel A:

2.3.4.1 Parcel A

IRM - On-Site Demolition of Buildings: Asbestos abatement and building demolition was completed in 2011 on ALCO-Maxon Site Parcel A.

IRM - Soil Excavation and LNAPL Recovery: Excavation activities were undertaken at AOC 1B in accordance with the approved IRM Work Plan starting on August 11, 2014. Visibly clean overlying soils were removed and stockpiled; as impacted soils were encountered (evidenced by staining, odors and/or elevated PID readings), they were removed from the excavation and stockpiled on a separate soil storage area that was lined with plastic sheeting and bermed to prohibit run-off. Soil sampling of the excavation was conducted on August 18, 2014 with concurrence from NYSDEC in the field on the number and locations of the soil samples.

Residual SVOC were detected in the soil samples, but at concentrations below their respective Restricted Residential Soil Cleanup Objective (SCO). DROs were also detected in each of the soil samples, but there is no corresponding SCO. The SVOCs that were detected were all polynuclear aromatic hydrocarbons (PAHs), that are typically related to coal usage; the PAH detections are consistent with the site-wide PAH detections that constitute Area of Concern 3 that will be addressed by the remedial action of the soil cover. With respect to VOCs, there were only two petroleum-related detections; the detections were reported as estimated concentrations below their respective quantification limit (and roughly three orders of magnitude below their respective SCOs).

IRM - Soil Hot Spots (Parcel A): There were limited, isolated areas of arsenic, lead, and/or mercury that slightly exceed Part 375 SCOs; these locations (sample locations RB-6 and SS-A3 on Parcel) were identified in the NYSDEC letter of 12/14/12. Excavation activities were undertaken at the Soil Hot Spots in accordance with the approved IRM Work Plan starting on August 22, 2014. Soil at each location from an area roughly 2 feet by 2 feet, to a depth of approximately 2 feet was removed and relocated to a temporary storage area that was lined with plastic sheeting. Soil sampling of the Soil Hot Spots was first conducted on August 22, 2014. Detections for metals above their Restricted Residential Soil Cleanup Objective (SCO) at the two hot spots located on Parcel A resulted in further excavation and another soil sampling event on September 18, 2014.

Arsenic and lead were detected in RB-06, the former at concentrations above its Restricted Residential SCO and the latter below. Mercury was detected in SS-A3 at concentrations above its Restricted Residential SCO. Secondary soil samples were taken from the RB-06

and SS-A3 locations after further remediation. Arsenic and lead were detected in RB-06-02, but at concentrations below their respective Restricted Residential SCO. Mercury was also detected again in SS-A3-02, but at concentrations below its Restricted Residential SCO.

2.4 Remedial Action Objectives

Each Parcel was issued a separate Decision Document by NYSDEC. The Remedial Action Objectives (RAOs) listed in these documents are as follows:

Parcel A (Decision Document, August 2014)

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.
- 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.

2.5 Remaining Contamination

The following provides a summary of the remaining contamination at the Site as presented in the Alternatives Assessment Report (AAR).

Parcel A:

The AAR identified three areas of concern (AOC) based on the findings of the RI and SRI Reports:

1. Historic Free-phase petroleum product on the water table around monitoring well MW-45 (AOC 1B);
2. The chlorinated solvent plume that extends in a narrow configuration from the vicinity of MW-19 to the Mohawk River (AOC 2); and
3. Residual soil impacts from polynuclear aromatic hydrocarbons (PAHs) (AOC 3).

The results of the exposure assessment indicate that there is currently one complete potential exposure pathway and two future potential exposure pathways:

- Potential exposure of current tenants of Buildings 306 and 330 to VOCs in indoor air through inhalation (AOC 1 and 2).
- Potential exposure of future on-Site workers to soil, groundwater, soil vapor or LNAPL that may be contaminated with VOCs, SVOCs, and/or metals during future intrusive activities at the Site. Routes of exposure to future on-Site workers could include inhalation, ingestion, dermal contact, eye contact, and puncture/injection (AOC 1, 2 and 3).
- Potential exposure to groundwater that may be contaminated with VOCs, SVOCs, and/or metals if groundwater wells are installed and used for drinking water, etc. (AOC 1, 2 and 3).

The final remedial measures for the site must satisfy Remedial Action Objectives (RAOs), which are site-specific statements that convey the goals for minimizing or eliminating substantial risks to public health and the environment.

The following RAOs for the site were identified as a result of the Exposure Assessment in the RI Report:

1. Prevent volatilization of organic constituents from subsurface soils and groundwater (vapor intrusion) in future on-site buildings (AOCs 1 and 2).
2. Prevent ingestion of contaminated groundwater (AOCs 1 and 2).
3. Prevent contact with impacted surficial soils (AOC 3).
4. Develop site management practices to address potential exposure pathways associated with future site work (AOCs 1, 2 and 3).

The AAR recommended Alternative 3 for the final site remedy, which would use a site-wide soil cover to mitigate AOC 3. Alternative 3 also includes measures to remediate groundwater exposure pathways associated with AOCs 1 and 2. Mitigation of the chlorinated solvent plume and its source area will be accomplished using in-situ remediation (chemical oxidation) and natural attenuation. The chlorinated solvent plume cross sections are shown in Figure 5.

The remedial goal was to evaluate options and select a remedial program to provide for appropriate redevelopment of the Site and to eliminate or mitigate threats to public health and the environment that, upon implementation, will allow the NYSDEC to issue a Certificate of Completion for the 3 BCP parcels and to lead to the redevelopment and reuse of the parcels.

2.5.1 Remaining Surface Soil Impacts

The analytical results from this RI indicate that there are no VOC or PCB impacts to surface soil at the Site. These results are generally consistent with results from previous investigations. There are relatively widespread SVOC detections in surface soils at concentrations below Part 375 SCOs, and only limited areas that exceed Part 375 SCOs. The presence of certain VOC and SVOC Tentatively Identified Compounds (TICs) suggest that degradation/breakdown of historic aged petroleum has and/or is occurring across the Site. Lastly, there were limited, isolated areas of arsenic, lead, and/or mercury that slightly exceeded Part 375 SCOs; these locations (sample location RB-6 on Parcel A and sample locations SS-A3 and SS-B3 on Parcel B) were identified in the NYSDEC letter of 12/14/12 and were subject to individual removal actions described in the approved IRM work plan and Construction Completion Report. The NYSDEC also indicated that use of a site-wide soil cover would be an acceptable remedial option to address residual impacts in surface soils.

2.5.2 Remaining Subsurface Soil Impacts

Analytical results for samples collected from the upper fill/sand unit suggest that there are no significant VOC impacts and only limited SVOC impacts to unsaturated soils. Within the unsaturated zone, the area of highest SVOC concentrations is present in the area just west of Building 308, the area located just south of Building 320, beneath the slab of Building 320, and the area between Buildings 316 and 332. Based on the analytical results for soil samples that were collected from test pits as part of the RI and from previous investigations, there is no evidence of any PCB or metal impacts to subsurface soils across the Site.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on subsurface soils. The NYSDEC also indicated that use of a site-wide soil cover would be an acceptable remedial option to address residual impacts.

2.5.3 Remaining Groundwater Impacts

The results obtained during the RI confirm the detection of a historic chlorinated solvent plume, which appears to originate upgradient from or in the vicinity of MW-19 and extends over 1,200 feet in length towards the Mohawk River. The plume is relatively narrow and is well-delineated to the east, south and west. The depth of the plume is relatively shallow (~20 feet

bgs) in the vicinity of monitoring well MW-19 and temporary monitoring well TMW-19C and deepens to approximately 50 to 70 feet bgs along the length of the plume. The data confirms that natural degradation is occurring based on the presence of PCE and TCE breakdown products.

The only other areas with impacts to groundwater are those with relatively localized SVOC (PAH) detections that are generally associated with former UST areas or free product recovery areas. However, a comparison of analytical results from this and from previous investigations suggests that contaminant concentrations have generally decreased, with few exceptions. The presence of TICs in most wells across the Site, consisting primarily of petroleum-related compounds, suggest that degradation/breakdown of historic, aged petroleum has occurred in groundwater across the Site.

2.5.4 Remaining Soil Vapor Impacts

The most apparent vapor impact to the subsurface is present at the southern edge of the Site located just north of Erie Boulevard. The subsurface in this area is primarily impacted by chlorinated VOCs related to the underlying chlorinated solvent groundwater condition. There are also chlorinated VOC impacts to subsurface soil vapor in a limited area between Buildings 346 and 324 and in the southwestern-most portion of the Site between Buildings 306 and 308. There are various but minor impacts to subsurface soil vapor from petroleum-related compounds; however, the detections do not indicate the presence of any significant petroleum source for soil vapor contamination.

2.5.5 Remaining Riverbank Soil Impacts

The analytical results from the RI confirmed that there are no VOC or PCB impacts to soils on the bank of the Mohawk River that runs parallel to the Site, generally consistent with results from previous investigations. Impacts from SVOCs to the riverbank of the Mohawk River associated with the Site are generally limited to areas where historic operations took place, in the immediate vicinity of Buildings 326, 324 and 322.

Based on the results obtained during the RI and the previous remedial measures undertaken, minor detections of inorganics (mainly iron, arsenic, mercury and lead) in riverbank soils appear to also be limited to the western portion of the riverbank that runs parallel to the Site (west of College Creek Outfall). The eastern portion of the riverbank has only limited detections of metals (arsenic and lead) slightly above Part 375 SCOs in the area north of Building 346.

In their letter of 12/14/12, NYSDEC concurred with the findings of the RI Report on riverbank soils, and requested limited soil removal activities to address a relatively small area where Part 375 SCOs were exceeded for arsenic and lead. These locations (sample location RB-6 on Parcel A and sample locations SS-A3 and SS-B3 on Parcel B) were identified in the NYSDEC letter of 12/14/12 and were subject to individual removal actions described in the approved IRM work plan and Parcel A Construction Completion Report. The NYSDEC also indicated that use of a site-wide soil cover would be an acceptable remedial option to address residual impacts in riverbank soils.

3.0 Institutional and Engineering Control Plan

3.1 General

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix D) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC.

3.2 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". An Institutional Control is required by the Decision Documents to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to restricted residential uses only. Adherence to these ICs on the site is established by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. These ICs are:

- The property may be used for: restricted residential use;
- All ECs must be operated and maintained as specified in this SMP;

- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Schenectady County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the Site, and any impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the site are prohibited;
- Appropriate clean soil cover of a minimum thickness of two feet, due to the actual restricted-residential use, must be maintained on the site (The site cover consists either of 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. The proposed 6" compacted roadway sub-base will suffice to meet this requirement for the purpose of conducting the FER inspection per NYSDEC Approval letter dated 12/29/2015);
- Notification must be filed with the property deed that residually-impacted soils are present below the clean soil cover;
- Excavation below the clean soil layer entail requires: 1) 10 day prior notification to NYSDEC and NYSDOH, 2) notification to contractors of the potential hazard (contractor personnel may be subject to 29 CFR 1910.120 – HAZWOPER), and 3) restoration of the clean soil layer Development of a Flood Hazard Mitigation Plan to comply with Chapter157 –Flood Hazard Control of the City of

Schenectady Code, as the ALCO site lies within FEMA mapped Zones A-16 and B;

- The maintenance and monitoring of Mohawk Harbor (lands under water);
- Follow the Excavation Work Plan (10/2015) to guide possible future site developments that may require excavation into the residually-contaminated soils;
- Develop a Soil-Vapor Mitigation Plan to guide future building construction; and
- Develop a Groundwater Monitoring Plan to document improving groundwater quality in response to remediation activities.

3.3 Engineering Controls

3.3.1 Cover or Cap

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 has been designed such that a demarcation layer, consisting of orange construction fence (or approved equivalent permeable geotextile), will be placed between site soils and clean fill. Additionally, the soil cover incorporates a minimum of 4 inches of topsoil to promote establishment of vegetation. In areas of the site where less than 2 feet of clean fill is proposed per the site grading plan, site soils will be excavated to a depth of 2 feet and the excavated area will be backfilled with clean soil. This will constitute the required soil cover in areas with that are shown as hatched on the associated site remedial plans (as provided as Figures 1 and 2 from the Remedial Design Plan, August 2015). These areas will also receive the standard demarcation layer, which will be placed at the bottom of the excavation trench and will be brought to grade and tied in to the adjacent demarcation layer. The design for the site-wide soil cover is based on the grading and site plans prepared by Hershberg & Hershberg. The Soil Cap Site Plan and proposed Site Development Plans are included with the Remedial Design Report (RDR) for each Parcel. 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).

The Excavation Work Plan (EWP) provided in Appendix D outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix E.

It should be noted that as part of site preparation the implementation of necessary flood hazard mitigation will require alteration of the current river bank, soil removal and the creation

of lands under water with hydraulic connection to the Mohawk River. That is, areas of the site adjacent to the Mohawk River will need to be excavated to below the water level of the Mohawk River, allowing the Mohawk River water to extend onto and cover certain areas of the site for flood control. The establishment of such lands under water is a necessary element of site preparation. The lands under water will not be subject to the protective soil cover or geotextile. Any lands under water created by site preparation within the existing legal description of the site will remain as part of the site and subject to certain provisions of the site management plan. Mohawk Harbor (lands under water) will be maintained by Maxon-ALCO Holdings and any additional removal of material will be subject to the Excavation Work Plan (2015).

The EWP provides the procedures that will be followed when remedial and/or development activities require excavation into the existing site soils (prior to placement of cover soils or creation of lands under water) or that in the future will penetrate the cover soil system or access the lands under water. The EWP is applicable to the three parcels that comprise the ALCO site: Parcel A, Parcel B and Parcel C (Site Nos. C447042, C447043, and C447044.)

3.3.2 Monitoring Wells associated with Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC with consultation with NYSDOH, until residual groundwater concentrations are found to be consistently below ambient water quality standards, the site SCGs, or have become asymptotic at an acceptable level over an extended period. In the event that monitoring data indicates that monitoring for natural attenuation may no longer be required, a proposal to discontinue the system will be submitted by the remedial party. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

3.3.3 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

3.3.3.1 Cover

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

4.0 Monitoring and Sampling Plan

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the site are included in the Quality Assurance Project Plan provided in Appendix F.

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment.

To adequately address these issues, this Monitoring and Sampling Plan provides information on:

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site-Wide Inspection

Site-wide inspections will be performed annually. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix G – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;

- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- If site records are complete and up to date; and
- Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

4.3 Post-Remediation Media Monitoring and Sampling

Sampling locations, required analytical parameters and schedule are provided in Table 18 – Post Remediation Sampling Requirements and Schedule below. Modification to the frequency or sampling requirements will require approval from the NYSDEC.

Post-Remediation Sampling Requirements and Schedule

Sampling Location	Analysis	*Schedule
Soil Cover System	Visual Inspection	Annually
Mohawk River (Spill 1604483)	Visual Inspection	Weekly
Harbor Sediment Sampling		Annually
Groundwater Monitoring Wells 62, 64S, 64D and 65	VOCs	Quarterly
Groundwater Monitoring Wells 71, 72, and 73	DROs	Quarterly
Harbor Surface Water Sampling		Annually
Soil Vapor Intrusion Sampling		Annually

*The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH. Discontinuance of such activity will be by permission of the NYSDEC and NYSDOH.

Detailed sample collection and analytical procedures and protocols are provided in Appendix H – Field Sampling Plan and Appendix F – Quality Assurance Project Plan.

4.3.1. Cover System Monitoring

The soil cover system is a permanent control, and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity. The site cover has been installed to allow for restricted-residential use of the site as a component of the site development. The cover system consists of buildings, pavement, sidewalks, etc., or the placement of a soil cover layer in areas of the site where the upper two feet of exposed surface soil exceeds the applicable restricted-residential SCOs. The soil cover is a minimum of two feet of soil, or an equivalent such as pavement or similar structure, meeting the restricted-residential SCOs for cover material as set forth in 6 NYCRR Part 375-6.8(d), placed over a demarcation layer.

The soil cover system must be periodically inspected by a Qualified Environmental Professional (QEP) for evidence of soil erosion, ponding, settlement, etc., and the findings of the site inspection recorded on the Site Management form included in Appendix G. The soil cover inspections must be performed in accordance with the inspection schedule outlined above, to ensure that the cover system remains intact and fit to perform the intended function.

4.3.2 Groundwater Sampling

Spill 1604483:

Three groundwater monitoring wells were installed to perform post in-situ oxidant injection treatment monitoring as part of the remedial work outlined in NYSDEC approved Parcel A Spill 1604483 Remedial Work Plan dated August 2016 (see Appendix J). Upon completion of installation of the three new monitoring wells initial groundwater sampling will be performed in accordance with the approved plan. A monthly report will be prepared to provide the findings of the work described in the work plan. The report will contain related supporting figures and tables, such as laboratory data reports and boring logs provided in appendices.

Chlorinated Solvent Plume:

Groundwater monitoring will be performed quarterly to assess the performance of the remedy. Modification to the frequency or sampling requirements will require approval from the NYSDEC.

The portion of the chlorinated solvent plume located on Parcel A will be addressed through monitored natural attenuation (MNA), which 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. It should be recognized that MNA is not a “walk away” or “do nothing” remedy; it entails a careful examination of site data to verify that active remedies been applied to the extent feasible and development/

implementation of a monitoring program to verify MNA processes are at work and that the residual contamination is no longer a threat to human health and the environment.

Four monitoring wells make up the Maxon-ALCO Site- Parcel A Performance Monitoring network to replace the former network consisting of MW 52, MW 63, and MW-25D. The wells were installed and sampled prior to in-situ remediation to establish pre-injection baseline quality to assess contaminant concentration reductions.

The following table summarizes the wells identification number, as well as the purpose, location, depths, diameter and screened intervals of the wells. As part of the groundwater monitoring, four on-site wells are sampled to evaluate the effectiveness of the remedial system.

Groundwater Monitoring Well Construction Details						
Monitoring Well ID	Well Location	Coordinates (longitude/ latitude)	Well Diameter (inches)	Depth from TOC	Length of Screen	Installed
MW-62	A	-	2	63.2	10	2016
MW-64S	A	-	2	38.55	10	2016
MW-64D	A	-	2	70.15	10	2016
MW-65	A	-	2	69.65	10	2016

Monitoring well construction logs are included in Appendix C of this document.

If biofouling or silt accumulation occurs in the on-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC.

The sampling frequency may only be modified with the approval of the NYSDEC. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC. Deliverables for the groundwater monitoring program are specified in Section 7.0 – Reporting Requirements.

4.3.3 Soil Vapor Intrusion Sampling

The Decision Document (DD) for Parcel A calls for "the evaluation of the potential for soil vapor intrusion for any buildings developed on the site". As of the date of preparation of this SMP (Fall 2016), soil-vapor intrusion evaluations have been performed for buildings being constructed on Parcel A; these evaluations have been submitted to NYSDEC and NYSDOH.

The design of each structure on the site has taken into account the potential for soil vapor intrusion, including the installation of vapor barriers below the building foundation and installation of soil vapor intrusion sampling devices. Many structures are not occupied on the first floor (e.g., – parking garages), and are ventilated in accordance with state and local building codes. Because of these factors, soil vapor intrusion is not considered a potential public health threat for such structures and soil vapor intrusion sampling will not be conducted.

For structures where there will be occupancy (either residence or commercial activity) on the first floor (where the first floor is in contact with the ground surface), soil vapor intrusion sampling will occur on a yearly basis. For buildings that are maintained under positive pressure, a written statement by the building owner that the building has been operated under positive pressure for the preceding year may be submitted in place of sampling. This written statement will be backed up by reasonable operating records/documentation that can be made available upon request. At the discretion of the building owner, soil vapor intrusion sampling can be performed. If the results of the sampling indicate that concentrations of contaminants below the building foundation are below applicable NYSDOH guidelines, annual sampling and/or statements regarding operation of the building ventilation systems will be terminated based on written request to NYSDEC and NYSDOH.

For structures where there will be occupancy (either residence or commercial activity) on the first floor and the building is not maintained under positive pressure, soil vapor intrusion sampling will be conducted on an annual basis. If the results of two consecutive years of soil vapor indicate that concentrations of contaminants below the building foundation are below applicable NYSDOH guidelines, annual sampling will be terminated based on written request to NYSDEC and NYSDOH.

The locations of soil vapor intrusion sampling points for each of the affected site structures (Casino Building) are shown on the figures provided in Appendix K.

The sampling frequency may only be modified with the approval of the NYSDEC. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC. Deliverables for the soil vapor intrusion sampling program are specified in Section 7.0 – Reporting Requirements.

4.3.4 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix G - Site Management Forms. Other observations (e.g., groundwater monitoring well integrity, etc.) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional detail regarding monitoring and sampling protocols are provided in the site-specific Field Sampling Plan provided as Appendix H of this document.

5.0 Operation and Maintenance Plan

5.1 General

The site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

6.0 Periodic Assessments/Evaluations

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

A vulnerability assessment was conducted during the site re-development and design process. All buildings on Parcels A and B have been demolished and the site has been re-designed to address the potential for flooding. Design elements included for flood control and surface water management include raising the overall elevation of the Site, cutback of the adjacent Mohawk Riverbank, and creation of a new Mohawk Harbor. The proposed Site Development Plans prepared by Hershberg & Hershberg are included with the Remedial Design Report (RDR) for each Parcel.

In addition to these design elements, the development of a Flood Hazard Mitigation Plan will be prepared to comply with Chapter157 –Flood Hazard Control of the City of Schenectady Code, as the ALCO Site lies within FEMA mapped Zones A-16 and B.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of any green remediation evaluations to be completed for the site during site management, and as reported in the Periodic Review Report (PRR).

The site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. As such, there is no energy usage, emissions or waste generation from active remedial systems onsite.

6.2.1 Timing of Green Remediation Evaluations

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the Project Manager feels appropriate, e.g., during significant maintenance events or in conjunction with storm recovery activities.

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR.

6.2.3 Frequency of System Checks, Sampling and Other Periodic Activities

Transportation to and from the Site and use of consumables in relation to visiting the Site in order to conduct system checks and or collect samples and shipping samples to a laboratory for analyses have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

Consideration shall be given to:

- Reduced sampling frequencies;
- Reduced site visits and system checks;
- Installation of remote sensing/operations and telemetry;
- Coordination/consolidation of activities to maximize foreman/labor time; and
- Use of mass transit for site visits, where available.

6.2.4 Metrics and Reporting

As discussed in Section 7.0 and as shown in Appendix G – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during site management and to identify corresponding benefits; a set of metrics has been developed.

6.3 Remedial System Optimization

A Remedial Site Optimization (RSO) study will be conducted any time that the NYSDEC or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;

- There is an anticipated transfer of the site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

The RSO study will focuses on overall site cleanup strategy, process optimization and management with the intent of identifying impediments to cleanup and improvements to site operations to increase efficiency, cost effectiveness and remedial time frames. Green remediation technology and principals are to be considered when performing the RSO.

7.0. Reporting Requirements

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix G. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 20 and summarized in the Periodic Review Report.

Schedule of Interim Monitoring/Inspection Reports	
Task/Report	Reporting Frequency*
Periodic Review Report	Annually, or as otherwise determined by the Department
*The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.	

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc.);
- Copies of all field forms completed (e.g., well sampling logs, chain-of- custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).
- Non-routine maintenance event reporting forms will include, at a minimum:
- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database.

7.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department beginning sixteen (16) months after the Certificate of Completion or equivalent document (e.g., Satisfactory Completion Letter, No Further Action Letter) is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the Department or at another frequency as may be required by the Department. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix B -Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.

- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database.
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
    - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan; and
    - Trends in contaminant levels in the affected media will be evaluated to determine if the remedy continues to be effective in achieving remedial goals as specified by the Decision Document.
    - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office in which the site is located, and in electronic format to NYSDEC Central Office and the NYSDOH Bureau of Environmental Exposure Investigation.

7.2.1 Certification of Institutional [and Engineering] Controls

Following the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the site, I certify that all of the following statements are true:*

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative] (and if the site consists of multiple properties): *[I have been authorized and designated by all site owners/remedial parties to sign this certification] for the site."*

- *No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the*

assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid; and

- *The assumptions made in the qualitative exposure assessment remain valid.*

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located and the NYSDOH Bureau of Environmental Exposure Investigation. The Periodic Review Report may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

7.4 Remedial Site Optimization Report

In the event that an RSO is to be performed (see Section 6.3, upon completion of an RSO, an RSO report must be submitted to the Department for approval. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken.

The RSO report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located, Site Control and the NYSDOH Bureau of Environmental Exposure Investigation.

8.0 References

Barton & Loguidice, August 2015. Parcel A - Remedial Design Report (RDR), Former ALCO Site.

Barton & Loguidice, August 2015. Parcel B - Remedial Design Report (RDR), Former ALCO Site.

Barton & Loguidice, August 2015. Parcel C - Remedial Design Report (RDR), Former ALCO Site.

Barton & Loguidice, February 2014. Alternatives Analysis Report (AAR), Former ALCO Site.

Barton & Loguidice, February 2014. Interim Remedial Measures Work Plan (IRM-WP, Former ALCO Site.

Barton & Loguidice, October 2013. Supplemental Remedial Investigation Report, Former ALCO Site.

CHA, August 2012. Remedial Investigation Report, ALCO-Maxon Sites, Parcels A,B&C.

Kleinfelder, Inc., September 2010. Remedial Investigation Work Plan, Parcel A of the ALCO-Maxon Site.

Kleinfelder, Inc., September 2010. Remedial Investigation Work Plan, Parcel B of the ALCO-Maxon Site.

Kleinfelder, Inc., September 2010. Remedial Investigation Work Plan, Parcel C of the ALCO-Maxon Site.

New York State Department of Environmental Conservation, May 2010. DER-10 / Technical Guidance for Site Investigation and Remediation. DEC Program Policy, Office of Remediation and Materials Management.

New York State Department of Environmental Conservation, December 2006. 6 NYCRR PART 375, Environmental Remediation Programs, Subparts 375-1 to 375- 4 & 375-6. Division of Environmental Remediation.

New York State Department of Environmental Conservation, May 2004. Draft Brownfield Cleanup Program Guide. Division of Environmental Remediation.

New York State Department of Environmental Conservation, 1997. Environmental Restoration Projects, Program ID No. DER-97-4058. Division of Environmental Remediation, Bureau of Program Management.

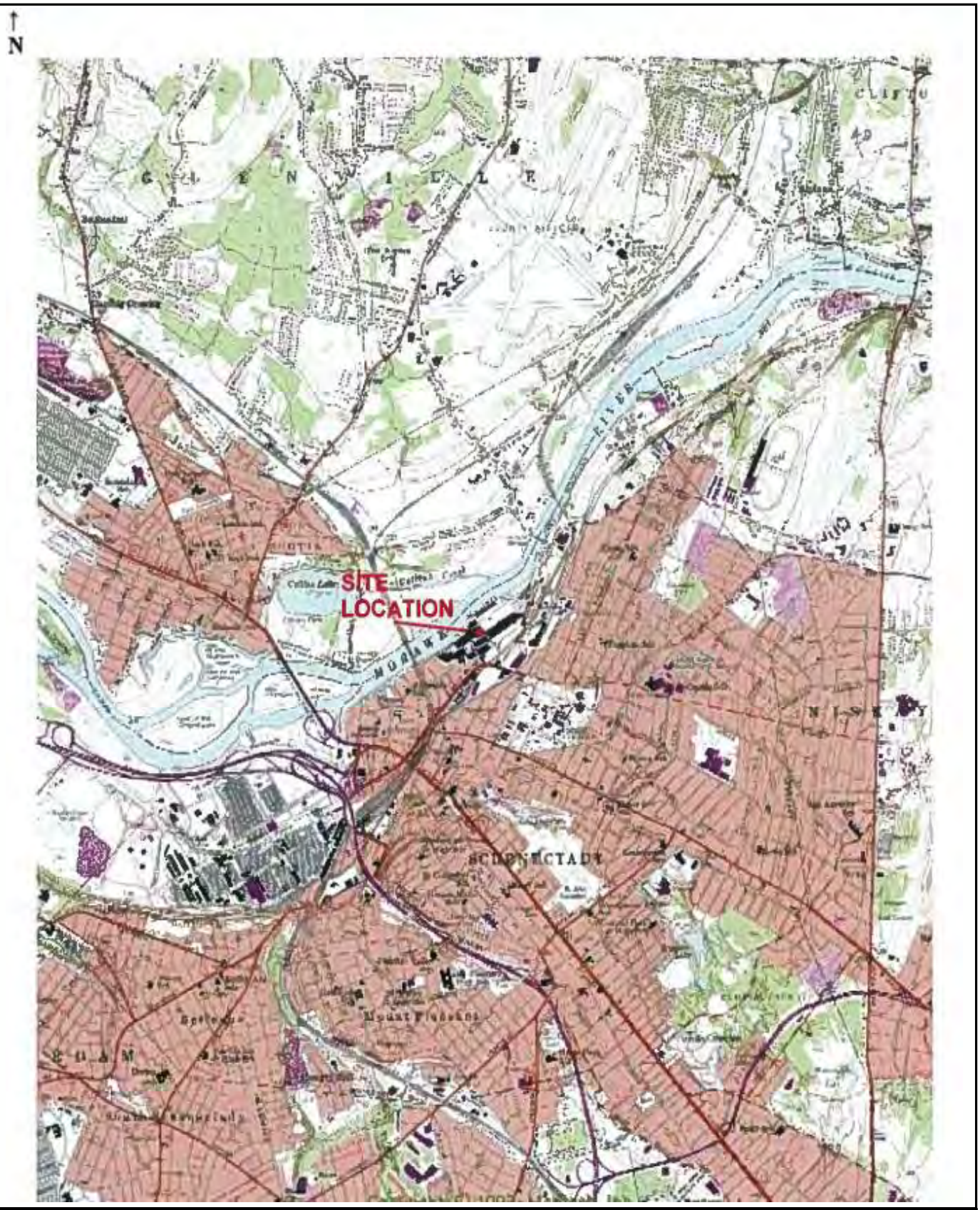
New York State Department of Environmental Conservation, 1998. "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations', Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. Reissued June 1998.

New York State Department of Health, 2006. "Guidance for Evaluating Soil Vapor Intrusion in the State of New York."

United States Environmental Protection Agency, 1994. "Radon Prevention in the Design and Construction of Schools and Other Large Buildings."

Figure 1

Project Location Map



Barton & Loguidice, P.C.

MAXON ALCO HOLDINGS, LLC

SITE MANAGEMENT PLAN

SITE PLAN

SCHENECTADY COUNTY NEW YORK

Date	Scale
OCTOBER, 2013	NOT TO SCALE

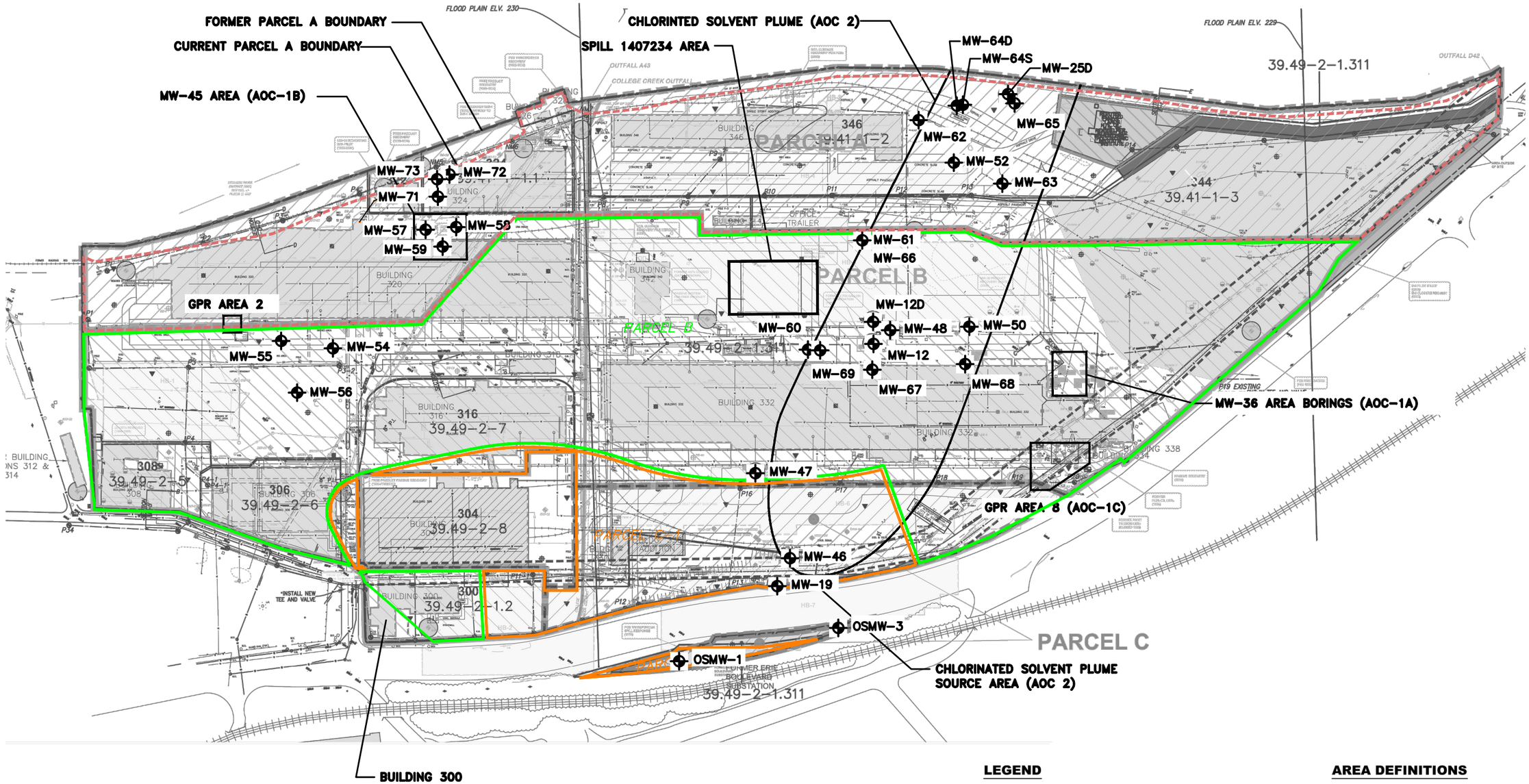
Figure Number: 1

Project Number: 1368.001.001

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

Figure 2

Site Plan



MAP REFERENCE:

1) "SURVEY OF LANDS, ALCO LOCOMOTIVE, INC., CITY OF SCHENECTADY, COUNTY OF SCHENECTADY", DATED MARCH 1970, AS PREPARED BY C.T. MALE ASSOCIATES.

2) "A SUBDIVISION OF A PORTION OF LANDS OF SCHENECTADY INDUSTRIAL CORPORATION", DATED JUNE 30, 1988, AS PREPARED BY THE ENVIRONMENTAL DESIGN PARTNERSHIP.

3) "SITE PLAN, PROPOSED C & D RECYCLING FACILITY, NOTT STREET INDUSTRIAL PARK", DATED FEBRUARY 1995, AS PREPARED BY INGALLS SMART ASSOCIATES.

SOURCE:

1) ABD ENGINEERS AND SURVEYORS FEBRUARY 1988, REVISED NOVEMBER 1999.

2) HISTORIC BUILDING (HB) LOCATIONS BASED ON A "FUEL OIL PIPING" PLAN, PREPARED FOR AMERICAN LOCOMOTIVE CO., REVISED AUGUST 22,195.

LEGEND

- PROPERTY BOUNDARY
- BCP SITE BOUNDARY
- MANHOLE WITH DRAINAGE STUCTURE NUMBER
- CATCH BASIN WITH DRAINAGE STRUCTURE NUMBER
- LIFT STATION WITH DRAINAGE STRUCTURE NUMBER
- MANHOLE (M.H.)
- CATCH BASIN (C.B.)
- MW-63 MONITORING WELL
- OW-2 MONITORING WELL (MW)
- TMW-6 TEMPORARY MONITORING WELL (TMW)
- RW-01 RECOVCERY WELL
- P-2 PIEZOMETER
- DB-18 GEOPROBE BORING
- SS-5 SURFACE SOIL SAMPLE LOCATION (SS)
- SB-2 SOIL BORING LOCATION

AREA DEFINITIONS

- BUILDINGS/STRUCTURES
- FORMER BUILDINGS (PREVIOUSLY DEMOLISHED)
- "EVI" PARCEL
- "RPI" PARCEL
- OTHER PROPERTIES NO PART OF SITE
- REMEDIATION AREA
- FORMER UST/AST LOCATIONS

SITE PLAN

MAXON ALCO HOLDINGS, LLC
SITE MANAGEMENT PLAN
CITY OF SCHENECTADY NEW YORK

Barton & Loguidice, Inc.

Date
NOVEMBER 2016

Scale
NO SCALE

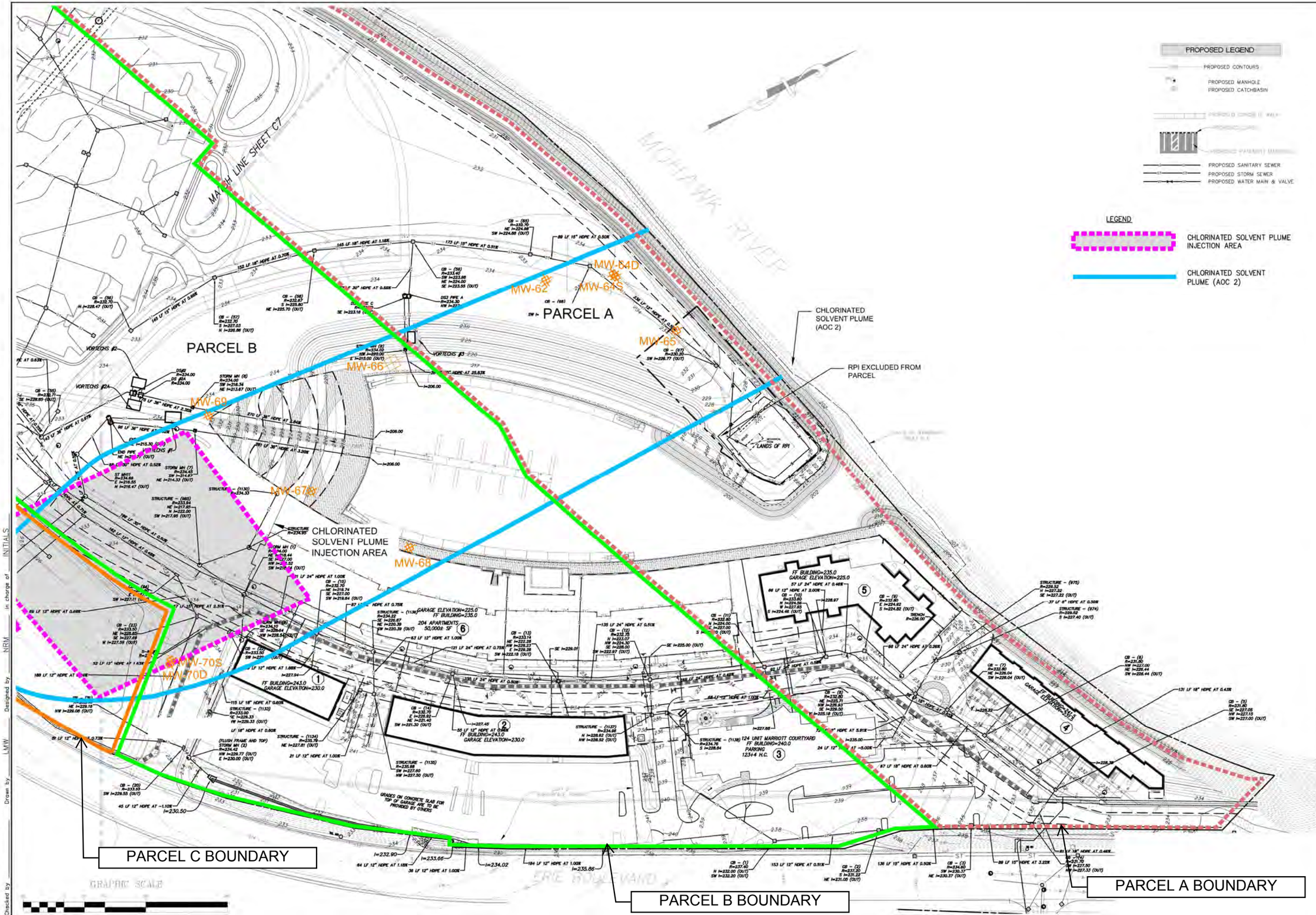
Figure Number
2

Project Number
1368.001.001

Plotted: Nov 09, 2016 - 2:54PM SYR By: kps
Z:\BL-Vault\D2\18217AD2-1C71-4823-8927-99D5C4054147\0\1082000-1082999\1082467\L\LL\SMP and FER Figures (ID 1082467)\1368001_SMP Figure 2.dwg

Figure 3

Parcels A, B, and C Monitoring Well Networks



COMPLETED CONSTRUCTION

Significant Construction Changes Are Shown

By _____ Date _____

Ck'd _____ Date _____

REVISIONS

MAXON ALCO HOLDINGS, LLC
ALCO-MAXON SITE
NYSDEC SITE NUMBER: C447042, C447043 AND C447044

PARCELS A, B AND C MONITORING WELL NETWORKS FOR THE CHLORINATED SOLVENT PLUME

CITY OF SCHENECTADY, SCHENECTADY COUNTY, NEW YORK

Barton & Loguidice, Inc.

Date
SEPTEMBER, 2016

Scale
1"=60'

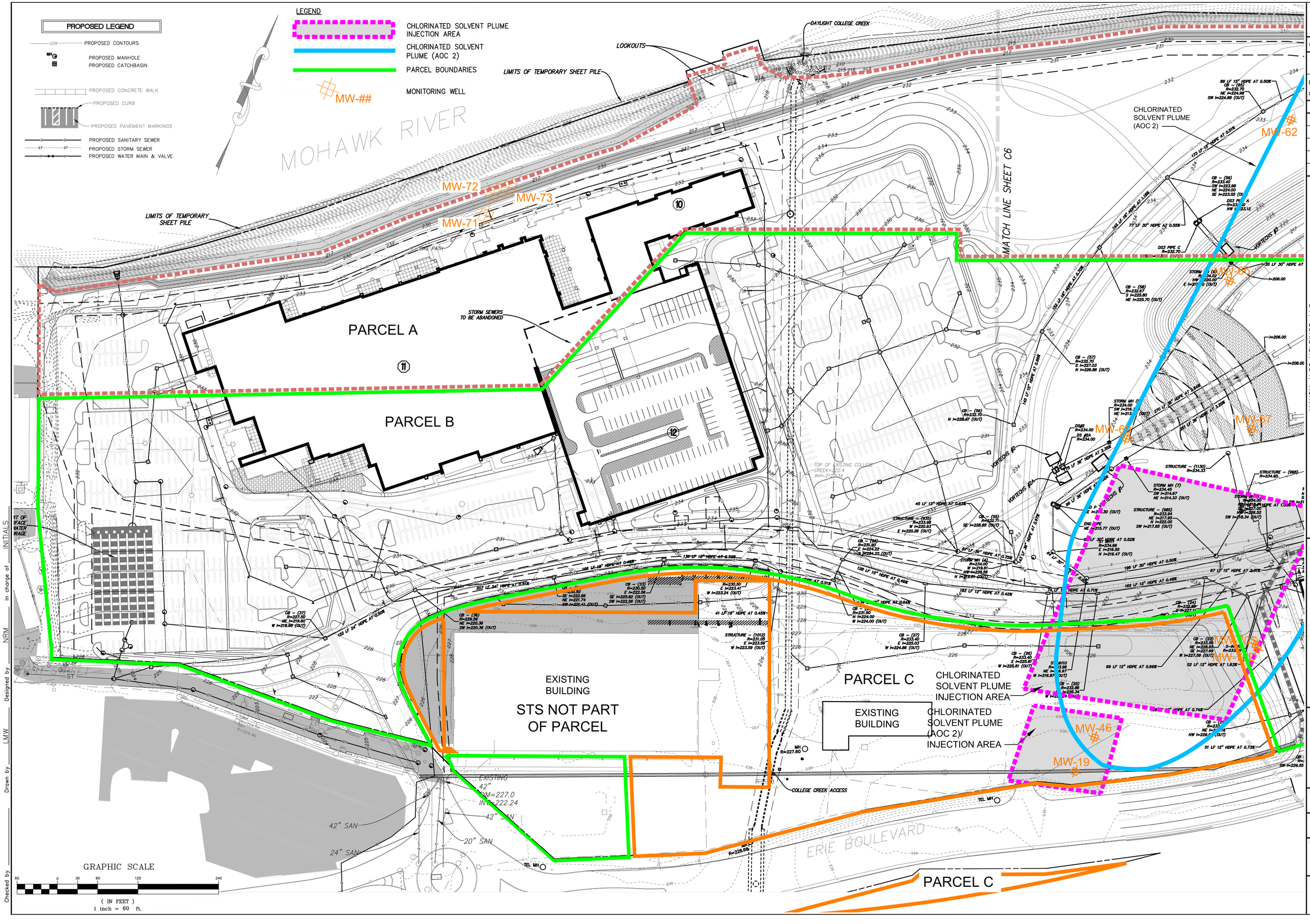
FIGURE
3

File Number
1338.008.001

Fig1.dwg - 3.2 (0 977525) - MWELL - 1338\008\100 - 977525\xrefs\977525-97196\977525-97196-9905605A1417\03\977000-977196\977525\xrefs\L-1338\008\100 - Sep 30, 2016 - 11:16AM SYR By: kas
Checked by _____ Drawn by LMW Designed by NRM in charge of INITIALS

Figure 4

Parcels A, B, and C Monitoring Well Networks



NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

COMPLETED CONSTRUCTION

Significant Construction Changes Are Shown

By _____ Date _____

Ck'd _____ Date _____

REVISIONS

MAXON ALCO HOLDINGS, LLC
ALCO-MAXON SITE
NYSDEC SITE NUMBER: C447042, C447043 AND C447044

PARCELS A, B AND C MONITORING WELL NETWORKS FOR THE CHLORINATED SOLVENT PLUME

CITY OF SCHENECTADY SCHENECTADY COUNTY, NEW YORK

Barton & Loguidice, Inc.

Date NOVEMBER 2016

Scale 1"=60'

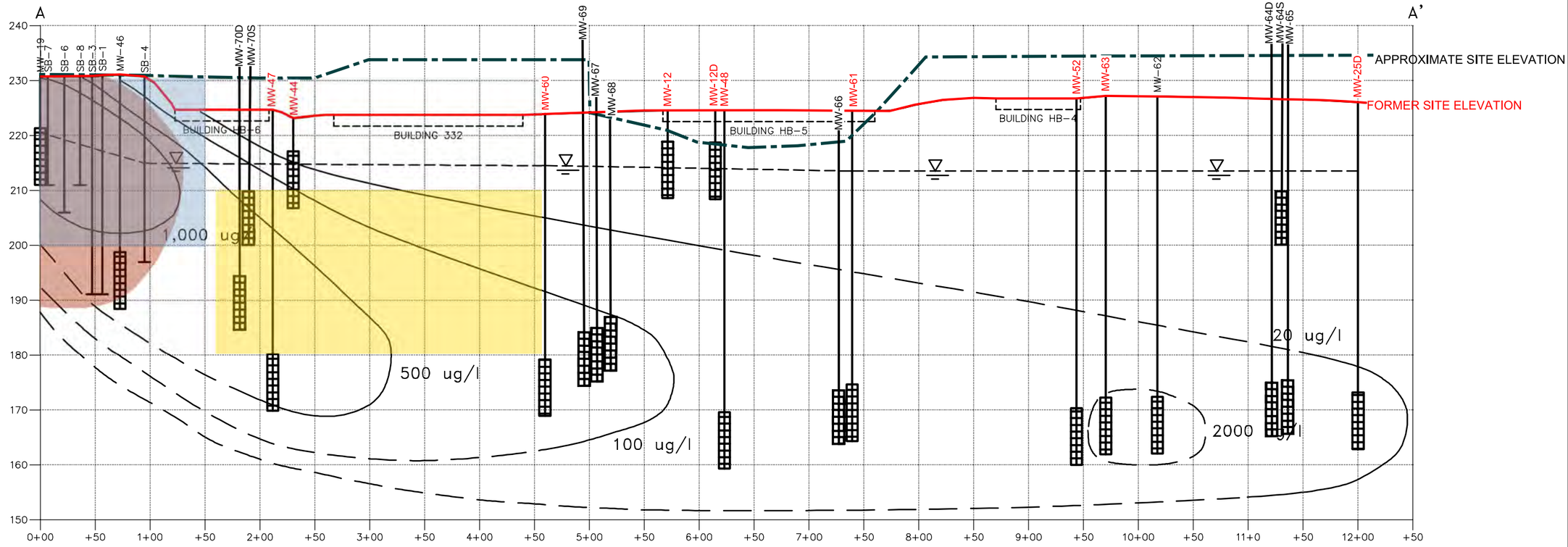
FIGURE 4

File Number 1338.008.001

Plotted: Nov 09, 2016 - 2:24PM By: kps
Drawn by LMW Designed by NRM In charge of INITIALS
Checked by SYR
2:\BL-Vault\02\1821A02-1C71-4823-8927-99D5C4D54147\D\1082600-1082999\1082467\L\L\SMP and FER Figures (ID 1082467)\1338.008.001 - MMELL - Fig 3.1-3.2.dwg

Figure 5

Chlorinated Solvent Plume Cross Section A-A

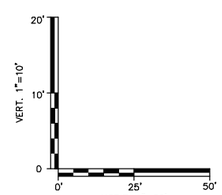


LEGEND:

- APPROXIMATE PERSULFOX INJECTION AREA
- APPROXIMATE REGENOX INJECTION AREA
- WATER TABLE
- MONITORING WELL
- SOIL BORING
- APPROXIMATE EXTENT OF SOURCE AREA

NOTES:

1. DASHED WHERE INFERRED
2. WELLS/BORINGS ARE PROJECTED ONTO CROSS SECTION LINES
3. WATER LEVELS COLLECTED DURING JUNE 2013 SAMPLING EVENT.
4. TOTAL CHLORINATED VOCs (TCVOC) OF GROUND WATER PRESENTED IN ug/l (PPB).
5. TCVOCs OF SOIL PRESENTED IN mk/kg.



Barton & Loguidice, P.C.
Engineers-Environmental Scientists-Planners-Landscape Designers

MAXON ALCO HOLDINGS, LLC
SITE MANAGEMENT PLAN
CHLORINATED SOLVENT PLUME
CROSS SECTION A-A'
CITY OF SCHENECTADY, NEW YORK

Figure 5
Project No. 1368.001.001
Date JULY, 2016

Appendix A

Environmental Easement

OFFICE OF THE SCHENECTADY COUNTY CLERK

620 STATE STREET
SCHENECTADY, NY 12305-2114
PHONE (518) 388-4220
FAX (518) 388-4224

JOHN J. WOODWARD
COUNTY CLERK
CMC

MARYELLEN BREHM
CYNTHIA REEDY
CARA JASENSKI
JEFF MORRETTE
DEPUTY COUNTY CLERKS

Instrument Number - 201650099
Recorded On 10/28/2016 At 12:44:19 PM
* Instrument Type - EASEMENT
* Book/Page - DEED/1948/892
* Total Pages - 14
Invoice Number - 888133 User ID: TMH
* Document Number - 2016-4560
* Grantor - MAXON ALCO HOLDINGS LLC
LOCOMOTIVE LANE PROPERTIES LLC
* Grantee - NEW YORK STATE PEOPLE OF

*RETURN DOCUMENT TO:
ROBERT A PANASCI ESQ
YOUNG/SOMMER LLC
5 PALISADES DR STE 300
ALBANY, NY 12205

* FEES

NY LAND SUR	$4.75
NY LAND COMP SUR	$14.25
CO GENERAL REVENUE	$95.00
CO LAND SUR	$0.25
CO LAND COMP SUR	$0.75
TOTAL PAID	$115.00

TRANSFER TAX
Real Estate Transfer Tax Num - 1256
Transfer Tax Amount - $ 0.00

I hereby CONFIRM that this document is
Recorded in the Schenectady County Clerk's Office
in Schenectady, New York

John J. Woodward
Schenectady County Clerk

THIS IS AN ENDORSEMENT PAGE

Do Not Detach

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* - Information denoted by an asterisk may change during the verification process and may not be reflected on this page.

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INSTRUMENT NUMBER - 201650099

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 14th day of October, 2016 between Owner(s) Maxon ALCO Holdings, LLC, having an office at 695 Rotterdam Industrial Park, Schenectady, New York 12306, County of Schenectady, State of New York; Locomotive Lane Properties, LLC, having an office at 695 Rotterdam Industrial Park, Schenectady, New York 12306, County of Schenectady, State of New York; and ALCO Hotel, LLC, having an office at 302 Washington Avenue, Albany, New York 12203, County of Albany, State of New York (the "Grantors"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, Maxon Alco Holdings, LLC is the owner of real property located at the address of 301 Nott Street in the City of Schenectady, County of Schenectady and State of New York, known and designated on the tax map of the County Clerk of Schenectady as tax map parcel numbers: Section 39.41 Block 1 Lots 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24; Section 39.34 Block 1 Lot 9; and Section 39.49 Block 2 Lot 1.7, being a portion of the property conveyed to Grantor by deed dated April 1, 2010 and recorded in the Schenectady County Clerk's Office in Liber and Page 1818/442; and

WHEREAS, Grantor, Locomotive Lane Properties, LLC, is the owner of real property located at the address of 301 Nott Street in the City of Schenectady, County of Schenectady and

State of New York, known and designated on the tax map of the County Clerk of Schenectady as tax map parcel number: Section 39.41 Block 1 Lot 4, being a portion of the property conveyed to Grantor by deed dated July 25, 2016 and recorded in the Schenectady County Clerk's Office in Liber and Page 1942/574; and

WHEREAS, Grantor, ALCO Hotel, LLC is the owner of real property located at the address of 301 Nott Street in the City of Schenectady, County of Schenectady and State of New York, known and designated on the tax map of the County Clerk of Schenectady as tax map parcel number: Section 39.34 Block 1 Lot 8, being a portion of the property conveyed to Grantor by deed dated April 14, 2016 and recorded in the Schenectady County Clerk's Office in Liber and Page 1935/919; and

WHEREAS, the property subject to this Environmental Easement (the "Controlled Property") comprises approximately 19.15 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 23, 2016 and last revised September 8, 2016 prepared by Daniel R. Hershberg, Licensed P.E. and L.S., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C447042-08-10 as amended May 12, 2016, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Schenectady County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C447042
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Maxon ALCO Holdings, LLC:

By: _____

Print Name: David M. Buicko

Title: Auth. Rep Date: 9-20-14

Grantor's Acknowledgment

STATE OF NEW YORK)
COUNTY OF Schenectady) ss:

On the 20 day of September in the year 2016, before me, the undersigned, personally appeared David M. Buicko, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

LAURENE A. SMITH
Notary Public, State of New York
Qualified in Rensselaer County
No. 01SM4826017
Commission Expires June 30, 2018

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Locomotive Lane Properties, LLC:

By: _____

Print Name: David M. Buicco

Title: Auth. Rep Date: 9-20-16

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Schenectady)

On the 20 day of September in the year 2016, before me, the undersigned, personally appeared David M. Buicco personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

LAURENE A. SMITH
Notary Public, State of New York
Qualified in Rensselaer County
No. 01SM4826017
Commission Expires June 30, 2018

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

ALCO Hotel, LLC:

By: _____

Print Name: David M. Bucko

Title: Auth. Rep Date: 9-20-16

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Schenectady)

On the 20 day of September in the year 2016, before me, the undersigned, personally appeared David M. Bucko, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

LAURENE A. SMITH
Notary Public, State of New York
Qualified in Rensselaer County
No. 01SM4826017
Commission Expires June 30, 2018

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 14th day of October, in the year 2016, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

SCHEDULE "A" PROPERTY DESCRIPTION

PARCEL A
ENVIRONMENTAL EASEMENT

ALL that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, more particularly bounded and described as follows:

BEGINNING at a point on the division line between the lands now or formerly of Legere Holdings LLC to the southwest and the lands now or formerly of Maxon Alco Holdings to the northeast, said point located the following five (5) courses and distances from the intersection between the northerly bounds of Front Street with the northeasterly bounds of Mohawk Avenue:

1. North 71°28'18" East along the northerly bounds of Front Street for a distance of 44.88 feet to a point;
2. North 18°41'04" West along the above described division line for a distance of 16.44 feet to a point;
3. North 26°42'22" West continuing along said division line for a distance of 205.40 feet to a point;
4. North 20°29'20" West continuing along said division line for a distance of 93.46 feet to a point;
5. North 20°54'00" West continuing along said division line for a distance of 79.76 feet to the **Point of Beginning**.

THENCE from said **POINT OF BEGINNING** continuing along the aforementioned division line, N.20°-54-00"W., 172.94 feet to a point;

THENCE through the lands now or formerly of Legere Holdings LLC and along the proposed 2016 southerly bounds of the Mohawk River the following 27 (twenty seven) courses and distances;

1. S.86°23'57"E. a distance of 30.51 feet to a point;
2. N.60°33'24"E., a distance of 395.66 feet to a point;
3. N.47°06'03"E., a distance of 147.76 feet to a point;
4. N.50°10'38"E., a distance of 256.90 feet to a point;
5. N.51°44'43"E., a distance of 67.54 feet to a point;
6. N.40°44'47"E., a distance of 128.80 feet to a point;
7. N.38°20'50"W., a distance of 45.04 feet to a point;
8. N.51°39'10"E., a distance of 60.00 feet to a point;
9. N.38°20'50"W., a distance of 12.00 feet to a point;
10. N.51°39'40"E., a distance of 56.01 feet to a point;
11. S.38°20'50"E., a distance of 31.62 feet to a point;
12. S.86°34'51"E., a distance of 38.48 feet to a point;
13. N.67°04'26"E., a distance of 50.85 feet to a point;
14. N.63°05'03"E., a distance of 72.34 feet to a point;
15. N.58°01'17"E., a distance of 148.35 feet to a point;
16. N.62°18'55"E., a distance of 149.08 feet to a point;

17. N.60°17'56"E., a distance of 147.13 feet to a point;
18. N.68°51'49"E.,a distance of 198.99 feet to a point;
19. N.72°54'52"E., a distance of 39.41 feet to a point;
20. N.75°31'33"E., a distance of 388.14 feet to a point;
21. N.78°46'12"E., a distance of 217.90 feet to a point;
22. N.75°35'27"E., a distance of 70.95 feet to a point;
23. N.73°24'10"E., a distance of 86.14 feet to a point;
24. N.65°19'17"E., a distance of 259.65 feet to a point;
25. N.59°20'01"E., a distance of 95.39 feet to a point;
26. N.45°34'04"E., a distance of 113.68 feet to a point;
27. N.23°48'28"E., a distance of 26.87 feet to a point in the westerly line of Maxon Road (also known as Maxon Road Arterial Highway);

THENCE along the westerly line of Maxon Road by the following three (3) courses:

1. S.18°05'10" E., 110.78 feet to a point;
2. S.28°40'50" W., 231.11 feet to a point;
3. S.28°06'00" W., 175.82 feet to a point;

THENCE through the lands of Maxon Alco Holdings LLC by the following ten (10) courses:

1. S.68°50'10" W., 227.13 feet to a point;
2. S.68°31'58" W., 365.92 feet to a point;
3. S.69°22'35" W., 202.92 feet to a point;
4. N.89°30'41" W., 83.83 feet to a point;
5. S.68°53'43" W., 133.57 feet to a point;
6. S.68°49'05" W., 454.67 feet to a point;
7. N.20°59'34" W., 40.13 feet to a point;
8. S.69°00'26" W., 407.96 feet to a point;
9. S.21°28'44" W., 315.76 feet to a point;
10. S.67°51'46" W., 751.18 feet to the **POINT OF BEGINNING.**

EXCEPTING THEREFROM A PARCEL OF LAND CONVEYED TO RENSSELAER POLYTECHNIC INSTITUTE BY DEED FILED IN THE OFFICE OF THE CLERK OF SCHENECTADY COUNTY IN LIBER 1186 OF DEEDS AT PAGE 188 SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING at a point in the lands of Maxon Alco Holdings LLC said **POINT OF BEGINNING** located as follows: **COMMENCING** at a point in the southerly boundary of the Mohawk River at its intersection with the westerly line of Maxon Road (also known as Maxon Road Arterial Highway); **THENCE** from said **POINT OF COMMENCMENT** ,S. 63° – 55' – 46" W., 818.70 feet to the first mentioned **POINT OF BEGINNING** which point is the **POINT OF BEGINNING** of the parcel herein described; **THENCE** through the first herein described parcel the following nine (9) courses and distances

1) S. 76° – 55' – 10" W., 165.95 feet to a point;
2) S. 12° – 19' – 05" E., 110.15 feet to a point;
3) N. 74° – 09' – 28" E., 69.13 feet to a point;
4) S. 35° – 16' – 17" E., 6.68 feet to a point;
5) N. 61° – 49' – 45" E., 19.69 feet to a point;
6) N. 67° – 28' – 03" E., 28.46 feet to a point;
7) N. 57° – 38' – 48" E., 26.14 feet to a point;

8) N. 47° – 54' – 28" E., 26.89 feet to a point
9) N. 12° – 40' – 49" W., 81.53 feet to the **POINT AND PLACE OF BEGINNING.**

SUBJECT to all easements, rights-of-way or restrictions of record.

PARCEL A CONTAINS 19.15± acres of land, more or less.

K&R:

ROBERT A. DANASCI, ESQ.
YOUNG/SOMMER LLC
5 PALISADES DR., SUITE 300
ALBANY, NY 12205

TP-534 (4/13)

New York State Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

See Form TP-584-I, Instructions for Form TP-584, *before completing this form. Print or type.*

Schedule A — Information relating to conveyance

Grantor/Transferor

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☐ Single member LLC
☐ Other

Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantor*): See Attached

Social security number:

Mailing address: 695 Rotterdam Industrial Park

Social security number:

City: Schenectady | State: NY | ZIP code: 12306

Federal EIN:

Single member's name if grantor is a single member LLC *(see instructions)*:

Single member EIN or SSN:

Grantee/Transferee

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☐ Single member LLC
☒ Other

Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantee*): The People of the State of New York

Social security number:

Mailing address: 625 Broadway

Social security number:

City: Albany | State: NY | ZIP code: 12233

Federal EIN: 14-6013200

Single member's name if grantee is a single member LLC *(see instructions)*:

Single member EIN or SSN:

Location and description of property conveyed

Tax map designation – Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
See attached	421500	301 Nott Street	Schenectady	Schenectady

Type of property conveyed *(check applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☒ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other _____

Date of conveyance: ____ (month) ____ (day) ____ (year)

Percentage of real property conveyed which is residential real property 0 % *(see instructions)*

Condition of conveyance *(check all that apply)*

a. ☐ Conveyance of fee interest
b. ☐ Acquisition of a controlling interest (state percentage acquired _____ %)
c. ☐ Transfer of a controlling interest (state percentage transferred _____ %)
d. ☐ Conveyance to cooperative housing corporation
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*
f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*
g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*
h. ☐ Conveyance of cooperative apartment(s)
i. ☐ Syndication
j. ☐ Conveyance of air rights or development rights
k. ☐ Contract assignment
l. ☐ Option assignment or surrender
m. ☐ Leasehold assignment or surrender
n. ☐ Leasehold grant
o. ☒ Conveyance of an easement
p. ☐ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part III)*
q. ☐ Conveyance of property partly within and partly outside the state
r. ☐ Conveyance pursuant to divorce or separation
s. ☐ Other *(describe)* _____

For recording officer's use	Amount received	Date received	Transaction number
	Schedule B., Part I $ _____ Schedule B., Part II $		

Schedule B — Real estate transfer tax return (Tax Law, Article 31)

Part I – Computation of tax due

1	Enter amount of consideration for the conveyance *(if you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III)* ☒ **Exemption claimed**	1.	
2	Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)*	2.	
3	Taxable consideration *(subtract line 2 from line 1)*	3.	
4	Tax: $2 for each $500, or fractional part thereof, of consideration on line 3	4.	
5	Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1,* Schedule G*)*	5.	
6	Total tax due* *(subtract line 5 from line 4)*	6.	

Part II – Computation of additional tax due on the conveyance of residential real property for $1 million or more

1	Enter amount of consideration for conveyance *(from* Part I*, line 1)*	1.	
2	Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in* Schedule A*)*	2.	
3	Total additional transfer tax due* *(multiply line 2 by 1% (.01))*	3.	

Part III – Explanation of exemption claimed on Part I, line 1 *(check any boxes that apply)*

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) ..... a ☒

b. Conveyance is to secure a debt or other obligation ..... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance ..... c ☒

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts ..... d ☐

e. Conveyance is given in connection with a tax sale ..... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F ..... f ☐

g. Conveyance consists of deed of partition ..... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act ..... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property ..... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment ..... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) *(attach documents supporting such claim)* ..... k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the ***NYC Department of Finance.*** If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance,*** directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule C — Credit Line Mortgage Certificate (Tax Law, Article 11)

Complete the following only if the interest being transferred is a fee simple interest.
I (we) certify that: *(check the appropriate box)*

1. ☒ The real property being sold or transferred is not subject to an outstanding credit line mortgage.

2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:
   - ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.
   - ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).
   - ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.
   - ☐ The maximum principal amount secured by the credit line mortgage is $3,000,000 or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

     Please note: for purposes of determining whether the maximum principal amount secured is $3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.
   - ☐ Other *(attach detailed explanation)*.

3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:
   - ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.
   - ☐ A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.

4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in _____ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is _____. No exemption from tax is claimed and the tax of _____ is being paid herewith. *(Make check payable to county clerk where deed will be recorded or, if the recording is to take place in New York City but not in Richmond County, make check payable to the* ***NYC Department of Finance.****)*

Signature (both the grantor(s) and grantee(s) must sign)

The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

Grantor signature	Title	Grantee signature	Title
	Counsel	Andrew Caiglielmi	Attorney
Grantor signature	Title	Grantee signature	Title
		Andrew Caiglielmi NYSDEC	

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, to the ***NYC Department of Finance***? If no recording is required, send your check(s), made payable to the ***Department of Taxation and Finance,*** directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule D - Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, section 663)

Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part II, and check the second box under *Exemptions for nonresident transferor(s)/seller(s)* and sign at bottom.

Part I - New York State residents

If you are a New York State resident transferor(s)/seller(s) listed in Schedule A of Form TP-584 (or an attachment to Form TP-584), you must sign the certification below. If one or more transferors/sellers of the real property or cooperative unit is a resident of New York State, **each** resident transferor/seller must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

Certification of resident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law, section 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law, section 685(c), but not as a condition of recording a deed.

Part II - Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Schedule A of Form TP-584 (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law, section 663(c), check the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor(s)/seller(s), that transferor(s)/seller(s) is not required to pay estimated personal income tax to New York State under Tax Law, section 663. **Each** nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferors/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form.* For more information, see *Payment of estimated personal income tax,* on page 1 of Form TP-584-I.

Exemption for nonresident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law, section 663 due to one of the following exemptions:

☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from _____ (Date) to _____ (Date) *(see instructions)*.

☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.

☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of the state of New York, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

GRANTORS:

Maxon ALCO Holdings, LLC EIN: 27-0407456

By: _____
David M. Buicko, Auth. Rep.

Locomotive Lane Properties, LLC EIN: 32-0482671

By: _____
David M. Buicko, Auth. Rep.

ALCO Hotel, LLC EIN: 80-0933031

By: _____
David M. Buicko, Auth. Rep.

Parcel A

Section	Lot	Block
39.41	1	4
		5
		6
		7
		9
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20
		21
		22
		23
		24
39.34	1	8
		9
39.49	2	1.7

Appendix B

List of Site Contacts

List of Site Contacts		
Name	**Phone/Email Address**	
Maxon ALCO Holdings, LLC	518-356-4445	[email address]
Young Sommer LLC	518-438-9907	[email address]
Barton & Loguidice, INC.	518-218-1801	[email address]
NYSDEC DER Project Manager	518-357-2045	[email address]
NYSDEC Regional HW Engineer	518-357-2045	[email address]
NYSDEC Site Control	518-402-9569	[email address]
NYSDOH Project Manager	518-402-7860	beei@health.ny.gov

Appendix C

Monitoring Well Boring and Construction Logs

SUBSURFACE INVESTIGATION LOG

Boring No. **MW-62**

Project No. 1368.001.001

PROJECT INFORMATION		DRILLING INFORMATION	
Project:	Former ALCO Site- Brownfield Cleanup Project	**Drilling Co:**	Northeastern Environmental Technologies Corporation
Client:	City of Schenectady	**Driller:**	Steve Cline
Site Location:	301 Nott Street, Schenectady, NY	**Rig Type:**	6620 GT Geoprobe
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4" H.S.A.
Project Manager:	Andrew Barber		
Logged By:	LJK	**Hammer Type, Weight/Drop:**	N/A
Dates Drilled	5/22/2013	**Borehole Diam:** 4"	**Total Depth:** 65.0'
LOCATION INFORMATION (NYSP)		**WELL INFORMATION**	
Horiz. Datum:	**Easting:** 643928.90	**Ground Elevation:** 227.39	**Screen Type/Diam:** PVC/2"
Vert. Datum:	**Northing:** 1455082.28	**TOC (PVC) Elevation:** 227.10	**Slot Size:** 0.010"

Barton & Loguidice, P.C. Supplemental Remedial Investigation BORING NO: MW-62

Depth (ft)	Sample Type	Description	Sample No.	Interval (ft)	Recovery (ft)	PID (ppm)	Lithology	Notes / *Well Construction*
2		0-10' cuttings: 0.0ppm; Black/Dark Brown SAND and GRAVEL, wet (probably surface water) 10-30' cuttings: 0.0ppm; Dark Brown Silty SAND, saturated. At 53' driller notes harder drilling. Drill to 65'.						
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								*Grout to surface*
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								
44								
46								
48								*Bentonite Seal*
50								
52								*#00 Choke Sand*
54								*#0 Sand*
56								*Top of Screen @ 55'*
58								*#1 Filter Sand*
60								
62								
64								*Bottom of Screen @ 65'*

SUBSURFACE INVESTIGATION LOG

BORING NO. **MW-64S**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location	301 Nott Street	**Rig Type:**	Geoprobe 7822DT		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A. and Mud Rotary		
Project Mana	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	2/4/16-2/19/16	**Borehole Diam:**	2"	**Total Depth:**	35' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum	**Easting:** N/A	**Ground Elevation:**	TBD	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C. CHLORONATED SOLVENT PLUME MONITORING WELLS Boring No: MW-64S

Depth	Lab Sample	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	PID (ppm)	Lithology	Notes / *Well Construction*
1-5	-	Dark Brown F SAND with FM subangular Gravel, dry. (Fill material)	-	-	-	-	3.2		
6-10	-	SA	-	-	-	-	0		
11-14	-	SA	-	-	-	-	0		
15-19	-	SA	-	-	-	-	0		Grout to Surface
20-24	-	Dark Grey F SAND and SILT, wet.	-	-	-	-	0		Bentonite Seal Top filter sand
25-29	-	Dark Grey FM SAND and SILT, wet.	-	-	-	-	0		Top of Screen @ 25' Clean, coarse sand pack
30-35	-	SA.	-	-	-	-	0		Bottom of Screen @ 35'

SUBSURFACE INVESTIGATION LOG

BORING NO. **MW-64D**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location	301 Nott Street	**Rig Type:**	Geoprobe 7822DT		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A. and Mud Rotary		
Project Mana	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	2/4/16-2/19/16	**Borehole Diam:**	2"	**Total Depth:**	67' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum	**Easting:** N/A	**Ground Elevation:**	TBD	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C | CHLORONATED SOLVENT PLUME MONITORING WELLS | Boring No: MW-64D

Depth	Lab Sample	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	PID (ppm)	Lithology	Notes / *Well Construction*
1-14	'	Dark Brown F SAND with FM subangular Gravel and Silt, moist. (Fill material)	1	-	-	-	8.6		
15-16	-	Dark Brown F SAND with F subangular Gravel and Silt and coal ash, moist. (Fill material)	2		1.5	7-3-4-4	0.1		
17-18	-	SA, moist to wet.	-		0.5	11-4-3-2	0.0		
19-20	-	Dark Grey F SAND and SILT with trace Clay, wet. (Soft)	3		1.0	Weight-1-1	0.0		
21-22	-	SA, No Clay.	-		2.0	Weight-2-1-2	0.0		
23-24	-	Dark Grey FM SAND with Silt, wet.	-		1.5	Weight-2-5-3	0.0		
25-26	-	SA.	4		2.0	1-1-2-2	0.0		
27-28	-	SA	-		2.0	Weight-3-2	0.0		
29-30	-	Dark Grey FM SAND with Silt, wet.	5		2.0	1-1-2-1	0.0		
31-32	-	Dark Grey MC SAND with Silt, wet.	6		2.0	1-2-1-2	0.0		
33-34	-	SA	-		1.0	1-1-1-1	0.0		
35-36	-	Dark Grey SILT and F SAND, wet.	7		2.0	2-3-2-2	0.0		
37-38	-	Dark Grey SILT and F SAND, wet.	-		2.0	2-1-1-2	0.0		
39-40	-	Dark Grey F SAND and SILT, wet. Wood @ 40'	-		2.0	2-3-3-4	0.0		
41-42	-	Dark Grey FM SAND with Silt, wet.	8		2.0	Weight-2-1-3	0.0		
43-44	-	Dark Grey F SAND and SILT, wet.	-		1.0	Weight-2-1	0.0		
45-46	-	SA	-		2.0	2-1-2-2	0.0		
47									

SUBSURFACE INVESTIGATION LOG

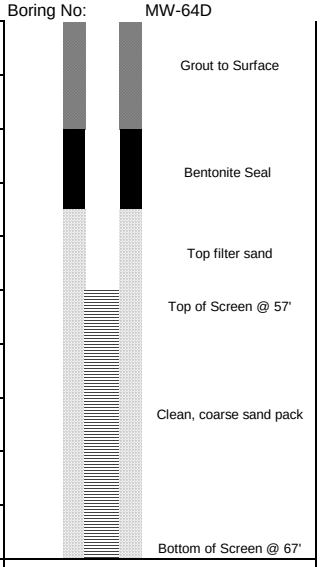
BORING NO. **MW-64D**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location	301 Nott Street	**Rig Type:**	Geoprobe 7822DT		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A. and Mud Rotary		
Project Mana	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	2/4/16-2/19/16	**Borehole Diam:**	2"	**Total Depth:**	67' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum	**Easting:** N/A	**Ground Elevation:**	TBD	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C. — CHLORONATED SOLVENT PLUME MONITORING WELLS — Boring No: MW-64D

48	-	SA	-		1.75	3-5-5-6	0.0		
49									
50	-	Dark Grey FM SAND with Silt, wet.	-		2.0	4-6-6-8	0.0		
51									
52	-	SA	-		1.0	4-5-5-5	0.0		
53									
54	-	SA, one piece of M rounded Gravel.	-		1.0	5-6-8-7	0.0		
55									
56	-	Dark Grey CLAY and SILT with trace F subangular Gravel, wet.	-		1.75	5-10-9-7	0.0		
57									
58	-	Dark Grey Clayey SILT with F Sand, FM angular to subangular Gravel, wet.	9		0.5	7-8-9-9	0.0		
59									
60	-	Dark Grey F SAND and SILT, with FM subangular Gravel, wet.	10		1.0	14-14-17-17	0.0		
61									
62	-	Dark Grey M SAND and FM GRAVEL, wet.	11		1.75	35-15-13-16	0.0		
63									
64	-	Dark Grey SILT and F SAND with FM subangular Gravel, wet. (Hard)	12		1.25	40-30-50/4	0.0		
65									
66	-	Dark Grey F SAND with Silt, trace F subangular Gravel, wet.	13		1.75	21-23-29-35	0.0		
67									



SUBSURFACE INVESTIGATION LOG

BORING NO. **MW-65**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location	301 Nott Street	**Rig Type:**	Geoprobe 7822DT		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A. and Mud Rotary		
Project Mana	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	2/4/16-2/19/16	**Borehole Diam:**	2"	**Total Depth:**	66' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum	**Easting:** N/A	**Ground Elevation:**	TBD	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C. CHLORONATED SOLVENT PLUME MONITORING WELLS Boring No: MW-65

Depth	Lab Sample	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	PID (ppm)	Lithology	Notes / *Well Construction*
1-15	'	0-15' Cuttings: Dark Brown F SAND with FM subangular Gravel and Silt, moist. (Fill material)	-	-	-	-	6.1		
15-47	-	15-59' Cuttings: Dark Grey FM SAND and SILT with trace Gravel and Clay, wet.	-	-	-	-	0.0		

SUBSURFACE INVESTIGATION LOG

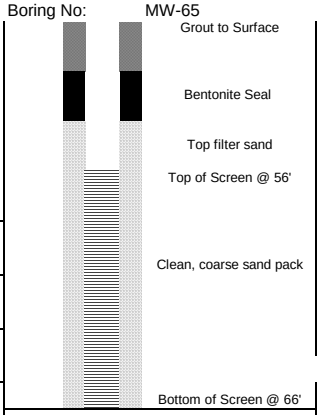
BORING NO. **MW-65**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location	301 Nott Street	**Rig Type:**	Geoprobe 7822DT		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A. and Mud Rotary		
Project Mana	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	2/4/16-2/19/16	**Borehole Diam:**	2"	**Total Depth:**	66' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum	**Easting:** N/A	**Ground Elevation:**	TBD	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C. CHLORONATED SOLVENT PLUME MONITORING WELLS Boring No: MW-65

48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60	-	Dark Grey FM SAND and SILT with FM subangular to subrounded Gravel, wet.	1		0.75	12-16-18-14	0.0	
61								
62	-	SA Dark Grey F SAND and SILT with F subrounded Gravel, wet. (firm)	2		2.00	21-20-18-14	0.0	
63								
64	-	SA	-		1.75	19-29-30-32	0.0	
65								
66	-	SA Granitic boulder @ 66-66.5'	-		0.25	23-50/1	0.0	
67								
68	-	SA	-		1.80	22-33-38-34	0.0	
69								



SUBSURFACE INVESTIGATION LOG

BORING NO. **MW-71**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Tom Carnes		
Site Location:	301 Nott Street	**Rig Type:**	Geoprobe 7822DT		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A.		
Project Manag	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	8/11/16 - 8/12/2016	**Borehole Diam:**	2"	**Total Depth:**	25' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum:	**Easting:** N/A	**Ground Elevation:**	230.5 ft. asl	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C | CHLORONATED SOLVENT PLUME MONITORING WELLS | Boring No: MW-71

Depth	Lab Sample	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	PID (ppm)	Lithology	Notes / *Well Construction*
1-5	-	0-4' Brown MC SAND, dry. (Fill material)	-	-	4.0	-	0		
6-10	-	6-7' Brown MC SAND, dry. (Fill material) 7-10' Brown/Grey MC SAND with Silt, F subangular Gravel, and coal ash, dry to moist. (Historical fill)	-	-	4.0	-	0.2		Grout to Surface
11-15	-	10-14 Brown/Grey MC SAND with Silt, F subangular Gravel, and coal ash, dry to moist. (Historical fill)	-	-	4.0	-	0.2 17.7		Bentonite Seal Top filter sand
16-20	BPB-10(18-19)	16.5-19' Brown/Grey MC SAND with Silt, F subangular Gravel, and coal ash, moist to wet. (Historical fill) 19-20' Grey Clayey SILT and F SAND, wet, petroleum odor.	-	-	3.5	-	0.3 99.2		Top of Screen @ 15' Clean, coarse sand pack
21-25	-	20-21' Dark Grey C SAND, wet 21-22' Grey Clayey F SAND, wet 22-25' Grey CLAY and SILT with trace F Sand, wet.	-	-	-	-	35.1 33.9 12.9		Bottom of Screen @ 25'

SUBSURFACE INVESTIGATION LOG

BORING NO. **MW-72**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location:	301 Nott Street	**Rig Type:**	Diedrich D120		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A.		
Project Manager	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	8/11/16 & 9/30/2016	**Borehole Diam:**	2"	**Total Depth:**	25' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum:	**Easting:** N/A	**Ground Elevation:**	217 ft. asl	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C. CHLORONATED SOLVENT PLUME MONITORING WELLS Boring No: MW-72

Depth	Lab Sample	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	PID (ppm)	Lithology	Notes / *Well Construction*
1	BPB-03(4.75-5)	3-4' C Gravel Fill	-	-	2.5	-			Portland Cement
2									Bentonite Seal
3									
4		4-4.75' Borwn FM SAND, wet.					0.1		Top filter sand
5		4.75-5' Dark Grey FM SAND, wet.					58.3		
6	-	NO RECOVERY	-	-	-	-			Top of Screen @ 5'
7									
8									
9									
10	-	10-14' Dark Grey FM SAND, wet, petroleum odor.	-	-	4.0	-	74.5		Clean, coarse sand pack
11									
12									
13									
14									
15	BPB-03(16-17)	15-17' Dark Grey Clayey F SAND, wet.	-	-	5.0	-	30.1		
16									
17		17-20' Dark Grey FM SAND, wet.					228.4		
18									
19									
20							20.9		Bottom of Screen @ 20'
21	-	20-25' Grey/Brown FC SAND, wet.	-	-	5.0	-	44.3		
22									
23							3.2		
24									
25							2.6		

SUBSURFACE INVESTIGATION LOG

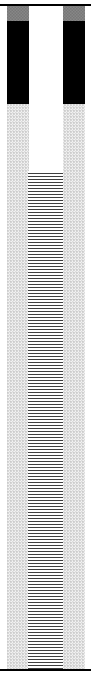
BORING NO. **MW-73**

Project No. **1368.001.001**

PROJECT INFORMATION		DRILLING INFORMATION			
Project:	Former ALCO Site	**Drilling Co:**	NYEG Drilling		
Client:	City of Schenectady	**Driller:**	Joel Raucher		
Site Location:	301 Nott Street	**Rig Type:**	Diedrich D120		
Job No:	1368.001.001	**Drilling Method(s):**	4 1/4 H.S.A.		
Project Manager	Andrew Barber	**Hammer Wt/Drop:**	N/A		
Logged By:	RJM2	**Hammer Type:**	N/A		
Dates Drilled	8/11/16 & 9/30/2016	**Borehole Diam:**	2"	**Total Depth:**	20' BGS
LOCATION INFORMATION		**WELL INFORMATION**			
Horiz. Datum:	**Easting:** N/A	**Ground Elevation:**	217 ft. asl	**Screen Type/Diam:**	PVC/2"
Vert. Datum:	**Northing:** N/A	**TOC Elevation:**	TBD	**Slot Size:**	0.010"

Barton & Loguidice, P.C. CHLORONATED SOLVENT PLUME MONITORING WELLS Boring No: MW-73

Depth	Lab Sample	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	PID (ppm)	Lithology	Notes / *Well Construction*
1	-	3-4' C Gravel Fill	-	-	2.5	-	87.9		Portland Cement
2									Bentonite Seal
3									
4		4-5' Dark Brown/Grey FM SAND with F subangular Gravel and Silt, wet. Bottom 3" - petroleum odor.							Top filter sand
5	BPB-06(5-6')	5-7.5' Dark Grey C SAND and F GRAVEL with Silt, wet.	-	-	5.0	-	161.2		Top of Screen @ 5'
6									
7									
8		7.5-10' Grey Silty FM SAND with some Clay, wet.					90.8		
9									
10	-	10-15' Grey FM SAND with some Silt, wet, petroleum odor.	-	-	5.0	-	131.2		Clean, coarse sand pack
11									
12									
13									
14									
15	-	15-19' Grey MC SAND, wet.	-	-	4.0	-	89.7		
16									
17									
18									
19							12.1		
20									Bottom of Screen @ 20'



Appendix D

Excavation Work Plan (EWP)

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady
Schenectady County, New York

Excavation Work Plan
(EXC-WP)

New York State
Brownfield Cleanup Program
Site Nos. C447042, C447043, and C447044

May 2014
Revised September 2015

Barton & Loguidice

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady

Excavation Work Plan
Site Nos. C447042, C447043, and C447044

May 2014
Revised September 2015

Prepared For:

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

Prepared By:

Barton & Loguidice, D.P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects
10 Airline Drive, Suite 200
Albany, New York 12205

I, the undersigned engineer, certify that I am currently a NYS registered professional engineer and that this Excavation 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

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. In November of 2013, MAH proposed the reconfiguration of Parcels B and C to NYSDEC to more efficiently proceed with potential Interim Remedial Measures and redevelopment planning; the proposed reconfiguration was approved by NYSDEC by letter dated December 23, 2013.

The purpose of the BCP is to encourage voluntary remediation of brownfield sites for reuse and development. This Excavation Work Plan (Exc-WP) is preceded by Remedial Investigation (RI) and Supplemental Remedial Investigation (SRI) Reports, which characterized impacts at the site resulting from historical industrial usage, and a Remedial Work Plan (RWP) and Alternatives Analysis Report (AAR), which evaluated and recommended remedial alternatives for the site. These reports have been reviewed and approved by NYSDEC in accordance with the BCA and the applicable portions of 6 NYCRR Part 375.

The Exc-WP has been prepared to provide the procedures that will be followed when remedial and/or development activities require excavation into the existing site soils (prior to placement of cover soils) or that in the future will penetrate the cover soil system, prior to the adoption of the Site Management Plan. The Exc-WP is applicable to the three parcels that comprise the ALCO site: Parcel A, Parcel B and Parcel C (Site Nos. C447042, C447043, and C447044, see Figure 1)

2.0 Implementation of Excavation Work Plan

This section describes, in detail, how this Exc-WP will be implemented.

2.1 Notification

At least 10 days prior to the start of any intrusive work that will entail penetrating into the existing site soils (prior to placement of cover soils) or that in the future (prior to adoption of the Site Management Plan) will penetrate the cover soil system and expose underlying, residual contamination, the site owner, or their representative will notify NYSDEC. Currently, this notification will be made to:

John R. Strang
Regional Hazardous Waste Remediation Engineer
1130 North Westcott Road
Schenectady, New York 12306-2014

Notification will be made by the Qualified Environmental Professional (QEP), provided by Barton & Loguidice, whose role is to administer this Excavation Work Plan.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the composite cover system, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this Exc-WP (Simple excavations may only require compliance with a portion of the Exc-WP. For example, excavation of a small volume of soil from above the water table that is directly loaded for off-site disposal would not require the stockpiling or fluids management provisions of this Exc-WP);
- A statement that the work will be performed in compliance with this Exc-WP, 29 CFR 1910.120 and applicable local, and federal requirements;
- A copy of the project-specific HASP, if different from the HASP provided in Appendix A of this document.
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results and clean fill certifications.

2.1.1 Harbor Soil Excavation

During active phase excavations of the Harbor soils, the QEP will notify NYSDEC within 1-hour when a change in soil character is encountered during the work. A change in soil character shall include the observation through soil screening methods defined herein, of areas of significantly stained and impacted soils, observation of free product and/or the presence of significant petroleum or chemical odors.

Harbor soil excavation is being conducted under NYSDEC Spill # 1505689. All notifications for the Harbor Soil Excavation will be made to the NYSDEC representative identified above.

A QEP provided by B&L will be on-site during Harbor excavation activities. Oversight of Harbor excavations and other areas of the site will be supplemented by environmental staff provided by Ambient, the firm contracted by the Owner to implement the Community Air Monitoring Plan. B&L will provide oversight of Ambient's personnel when they are conducting soil screening and monitoring in accordance with this plan.

For excavated areas outside of the Harbor Soil Excavation area, that do not fall within the defined criteria for remedial and development excavations into known or potentially contaminated materials, excavation oversight may be directly addressed by Ambient personnel, without a B&L QEP on site. These areas of the site will be identified with the DEC site representative, and B&L will coordinate with Ambient staff for the field oversight. Ambient will have electronic access to B&L QEP's, who will respond to the site if site conditions identify potential for the presence of significantly contaminated materials.

2.2 Soil Screening Methods

Visual, olfactory and instrument-based soil screening will be performed by the QEP during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work Soil screening will be defined and subject to the Site Management Plan upon its adoption.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing and material that can be returned to the subsurface.

During Harbor excavations soil screening will be conducted continuously by the QEP or designated subcontractor (e.g. Ambient), such that excavation and area loads will be screened approximately every 15 minutes, as practical.

2.2.1 Stockpiled Harbor Soils as of 9/2/15

Stockpiled soils as of 9/2/15 will be screened by the soil screening methods, following a review by DEC and the QEP. Elevations of the existing pile will be obtained, and use of the pile would be resumed following soil screening, if surface conditions meeting the screening criteria. Should soil screening identify areas of concern, then a sampling protocol will be proposed for further pile evaluation.

Once approval to continue use of the Harbor soils excavate pile is obtained, newly excavated soils which meet the screening criteria will be placed on the pile, above the recorded elevations. The excavated soil will be amended for structural purposes for planned reuse as site subbase soils below the casino parking lot. Once the placement operation reaches the recorded elevations, then soil screening will be conducted on the staged soil pile during structural processing. The soil screening criteria will be applied to the remaining staged soils.

2.3 Stockpile Methods

Stockpile staging areas shall be prepared for excavated fill materials and imported off-site fill materials as discussed below.

Soil stockpiles will be managed in accordance with the site SWPPP.

Stockpiles of contaminated material identified by screening will be kept covered with appropriately anchored tarps, and will be placed on polyethylene sheeting. Uncontaminated soils will be maintained on the site working surface without tarping, and will be subject to the SWPPP soil stockpile requirements. Stockpiles of contaminated materials will be inspected and maintained on a daily basis. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection of NYSDEC. Other material stockpiles will be inspected and maintained in accordance with the SWPPPP.

2.3.1 Excavated, Saturated Fill Material Stockpiles

If saturated fill material is excavated as part of the Work, a stockpile staging area will be constructed. The proposed stockpile staging area for excavated fill materials will be constructed so that it is large enough to accommodate anticipated stockpiles as well as stabilization reagent, equipment and operations, if required. Specific dewatering methods will be proposed by the site contractor, and discussed with DEC. The construction requirements for the excavated, saturated fill material stockpiles can be modified, with the NYSDEC's approval, depending on the actual scope of work to be performed.

2.3.2 Imported & On-site Fill Material Stockpiles

All approved on-site and off-site fill materials are required to be stockpiled and managed according to the prevailing Storm Water Pollution Prevention Plan (SWPPP) for the site, which is incorporated here by reference.

2.4 Materials Excavation and Load Out

A qualified environmental professional or person under their supervision will oversee invasive work and the excavation and load-out of excavated material.

The owner of the property and its contractors are responsible for safe implementation of invasive and other work performed under this Plan.

When transporting contaminated soils or materials off of the site for disposal, loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

The QEP will be responsible for ensuring that outbound trucks will be decontaminated, if needed before leaving the site until the activities performed under this section are complete. Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The QEP will be responsible for ensuring that egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

2.5 Materials Transport Off-Site

Transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

If necessary, trucks will be washed prior to leaving the site. Trucks loaded with site materials will exit the vicinity of the site using only an approved truck route. The most appropriate route will take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site. Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development. Queuing of trucks will be performed on-site; to the extent practicable, in order to minimize off-site disturbance. Every effort will be made to eliminate any off-site queuing.

2.6 Materials Disposal Off-Site

Soil/fill/solid waste/hazardous waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with local, State, 6 NYCRR Part 360 and 364, and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e., hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Final Engineering Report (FER) This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading, and facility receipts. Non-hazardous historic fill and contaminated soils taken off-site will be handled, at a minimum, as a Municipal Solid Waste per 6 NYCRR Part 360-1.2. Waste characterization sampling shall be performed in accordance with the requirements of each disposal facility.

2.7 Materials Re-Use On-Site

Excavated existing soils (or in the future, soils below the demarcation layer) proposed for on-site use shall be segregated in stockpiles and in accordance with the requirements of Section 2.3 of this EWP. The QEP will ensure that procedures defined for materials re-use are followed and that unacceptable material does not remain on-site. Excavated existing soils and/or soils removed below the future demarcation layer that are acceptable for re-use on-site will be placed below the final surface of the existing or modified (as approved by the NYSDEC) cover system and will not be re-used within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. Demolition material proposed for re-use on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be re-used on-site.

2.8 Fluids Management

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge, and development fluids may be recharged back to the land surface or subsurface of the site in the event that prior approval is obtained from the NYSDEC Case Manager. If this approval is not obtained, fluids will be managed via off-site disposal.

Discharge of water generated during large-scale construction activities if applicable, will be performed pursuant to City of Schenectady authorization. As noted in section 2.11 below, the current SWPPP will remain in effect during excavation activities. It is assumed that any local permits that might apply to the implementation of the NYSDEC approved work plans will be waived under provisions of the Brownfield Cleanup Agreement and applicable regulations and not be required as long as substantive requirements of any such permits are followed.

2.9 Cover System Restoration

After the completion of soil removal and any other invasive activities, the cover system will be restored in a manner that complies with the requirements approved of the Remedial Design. For all components of the composite cover system, any constructed demarcation layer will be replaced to provide a visual reference to the top of the existing site soils. If the type of composite cover system changes, with NYSDEC approval, from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination'. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the SMP.

2.10 Backfill from Off-Site Sources

Materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in the SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

Imported fill materials proposed for on-site use shall be certified clean from each off-site source. The clean fill certification shall include information regarding past use of the site, confirmation that the source area background has been checked, and confirmation of its DOT certification, if applicable. Sampling of off-site fill material shall be performed in accordance with the requirements of DER-10 and 6 NYCRR Part 355-6.7(d). The Engineer, with the concurrence of the NYSDEC, will review results of pre- and post-qualification testing of off-site fill materials and shall be the sole judge as to acceptability of the material.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site. Trucks entering the site with imported

soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

2.11 Stormwater Pollution Prevention

A SWPPP will be in place and will be the governing document for stormwater pollution prevention. The prevailing SWPPP is incorporated here by reference.

2.12 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. NYSDEC will be notified within one hour, and a spill will be reported to the NYSDEC Spills Hot Line, unless otherwise directed by NYSDEC.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal methods. Chemical analysis will be performed according to discussions with NYSDEC.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's project Manager. Reportable quantities of petroleum product released will also be reported to the NYSDEC spills hotline.

2.13 Community Air Monitoring Plan

A generic Community Air Monitoring Plan is provided in the HASP provided in Appendix A. The CAMP is being implemented and reporting monitored by Ambient Environmental. The QEP will coordinate the daily and weekly activities associated with excavation tasks with Ambient. Ambient will provide limited soil screening for small excavation areas not associated with the Harbor, or known contaminated zones.

Exceedances of action levels listed in the CAMP will be reported to the QEP who will report the information to NYSDEC and NYSDOH as indicated in section 2.1.

2.14 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Qualified Professional, and any measures that are implemented will be discussed in the Period Review Report.

Appropriate and necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

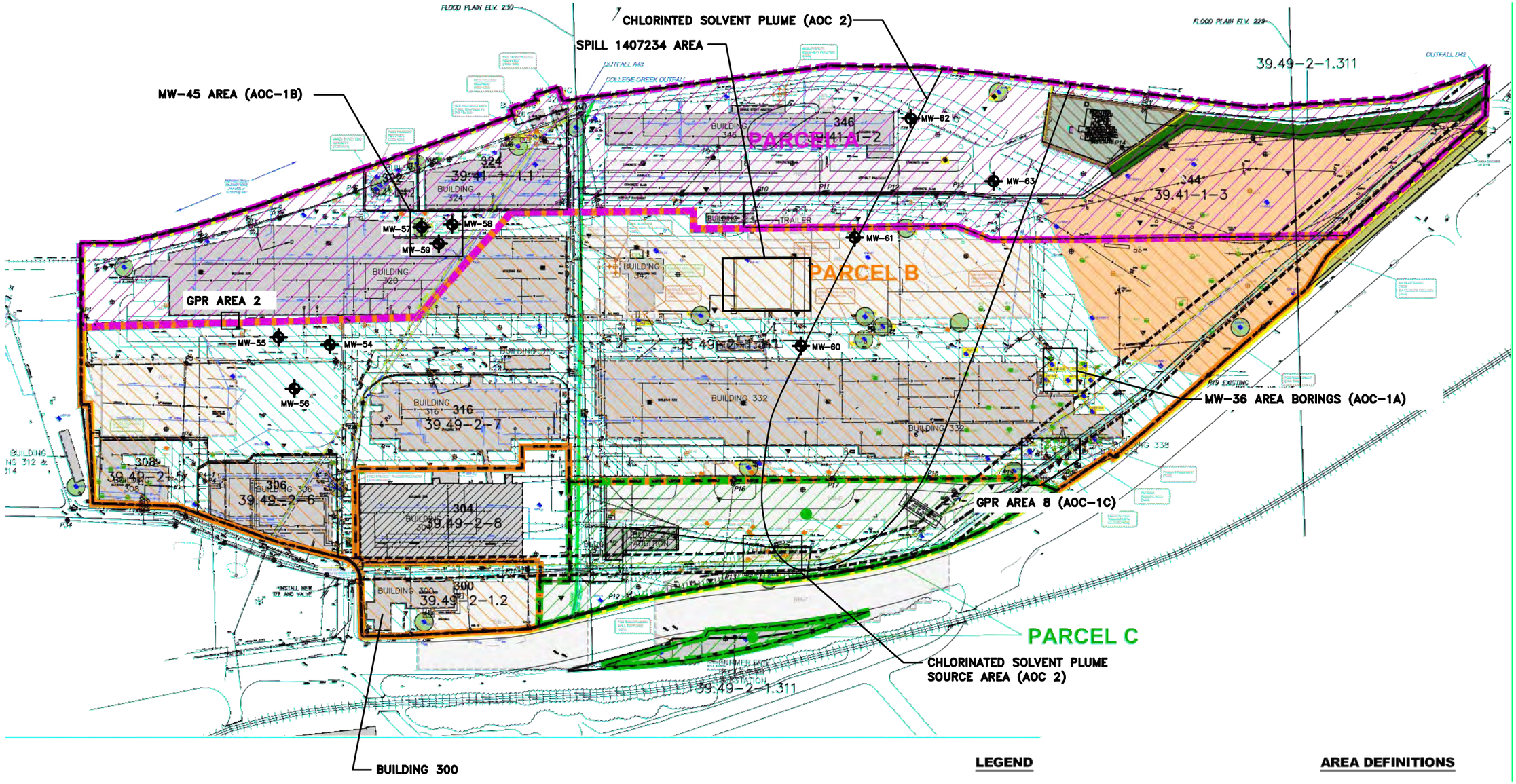
2.15 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

Figure 1

Site Location Map Showing Areas of Concern



MAP REFERENCE:

1) "SURVEY OF LANDS, ALCO LOCOMOTIVE, INC., CITY OF SCHENECTADY, COUNTY OF SCHENECTADY", DATED MARCH 1970, AS PREPARED BY C.T. MALE ASSOCIATES.

2) "A SUBDIVISION OF A PORTION OF LANDS OF SCHENECTADY INDUSTRIAL CORPORATION", DATED JUNE 30, 1988, AS PREPARED BY THE ENVIRONMENTAL DESIGN PARTNERSHIP.

3) "SITE PLAN, PROPOSED C & D RECYCLING FACILITY, NOTT STREET INDUSTRIAL PARK", DATED FEBRUARY 1995, AS PREPARED BY INGALLS SMART ASSOCIATES.

SOURCE:

1) ABD ENGINEERS AND SURVEYORS FEBRUARY 1988, REVISED NOVEMBER 1999.

2) HISTORIC BUILDING (HB) LOCATIONS BASED ON A "FUEL OIL PIPING" PLAN, PREPARED FOR AMERICAN LOCOMOTIVE CO., REVISED AUGUST 22,195.

LEGEND

- PROPERTY BOUNDARY
- BCP SITE BOUNDARY
- MANHOLE WITH DRAINAGE STUCTURE NUMBER
- CATCH BASIN WITH DRAINAGE STRUCTURE NUMBER
- LIFT STATION WITH DRAINAGE STRUCTURE NUMBER
- MANHOLE (M.H.)
- CATCH BASIN (C.B.)
- OW-2 MONITORING WELL (MW)
- TMW-6 TEMPORARY MONITORING WELL (TMW)
- RW-01 RECOVCERY WELL
- P-2 PIEZOMETER
- DB-18 GEOPROBE BORING
- SS-5 SURFACE SOIL SAMPLE LOCATION (SS)
- SB-2 SOIL BORING LOCATION
- MW-63 MONITORING WELL (SRI INVESTIGATION 2013)

AREA DEFINITIONS

- BUILDINGS/STRUCTURES
- FORMER BUILDINGS (PREVIOUSLY DEMOLISHED)
- "EVI" PARCEL
- "RPI" PARCEL
- OTHER PROPERTIES NO PART OF SITE
- REMEDIATION AREA
- FORMER UST/AST LOCATIONS

OVERALL SITE PLAN

MAXON ALCO HOLDINGS, LLC

CITY OF SCHENECTADY NEW YORK

Barton & Loguidice, D.P.C.

Date: MARCH, 2015

Scale: 1" = 100'

Figure Number: 1

Project Number: 1368.001.001

Plotted: Mar 24, 2015 - 3:27PM SYR By: jgs
Z:\BL-Vault\D2\18217AD2-1C71-4823-8927-99D5C4054147\0\765000-765999\765084\L\L\1368001_IRM Work Plan-Figure 1 (ID 765084).dwg

Appendix A

Health and Safety Plan

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady
Schenectady County, New York

Health and Safety Plan (HASP)

New York State
Brownfield Cleanup Program
Site Nos. C447042, C447043, and C447044

December 2013

Barton & Loguidice

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady

Health and Safety Plan
Site Nos. C447042, C447043, and C447044

December 2013

Prepared For:

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

Prepared By:

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects
10 Airline Drive, Suite 200
Albany, New York 12205

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Section Page

Tables

Attachments

1.0 General Information

1.1 Introduction

This Health and Safety Plan (HASP) was prepared by Barton & Loguidice, Inc. (B&L) for future excavation work at the former ALCO site where the existing soils will be penetrated. The existing soils contain residual impacts from historic activities at the site. The impacts were characterized by the Remedial Investigation and Supplemental Remedial Investigation that were conducted at the site. A summary of the impacts is provided in this HASP

Please note that this site falls within the definition of a hazardous waste sites for the purposes of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response*. Plan. This was prepared in accordance with 29 CFR 1910.120. This plan was prepared, and will be implemented, by a qualified person as defined under 29 CFR 1910.120; this is also in accordance with NYSDEC DER-10, *Technical Guidance for Site Investigation and Remediation.*

The purpose of this Health and Safety Plan for the Steel Treaters contaminant source removal IRM is to provide specific guidelines and establish procedures for the protection of personnel during the field investigation and site remediation activities. The Plan is based on the site information available at this time and anticipated conditions to be encountered during the different phases of work. This Plan is subject to modification as data are collected and evaluated.

All personnel conducting activities on-site must comply with all applicable Federal and State rules and regulations regarding safe work practices. Personnel conducting field activities must also be familiar with the procedures, requirements and provisions of this Plan. In the event of conflicting Plans and requirements, personnel must implement those safety practices that afford the highest level of protection.

This HASP is not intended to be used by any subcontractors, but it may be used as the basis for contractors to prepare their own plans. This HASP may not address the specific health and safety needs or requirements of subcontractors and should be viewed as the minimum requirement.

2.0 Project Information

2.1 Comprehensive Work Plan

This HASP is appended to the Site Remedial Work Plan (RWP) prepared by Barton & Loguidice, Inc., which describes the proposed remedial activities for the site.

2.2 Scope of Work

Remedial and/or development activities at the site may entail excavation into the existing in-place soils at the site.

2.3 Organization Structure

Barton & Loguidice, P.C.:
Program Manager – Scott Nostrand, P.E.

Site Manager – Andy Barber
Maxon ALCO Holdings, LLC (MAH):

Project Contact – Steve Luciano

The Site Manager is responsible for the day-to-day activities of the project and for coordinating between office and field personnel. The Site Manager will oversee the remedial activities. The Barton & Loguidice on-site field personnel will serve as the Site Safety and Health Coordinator (SSHC). The SSHC will establish operating standards and coordinate overall project safety and health activities for the site. The SSHC will review project plans and revisions to determine that safety and health procedures are maintained throughout the project. Specifically the responsibilities of the SSHC include:

a. Aiding the selection of protective clothing and equipment.

b. Periodically inspecting protective clothing and equipment.

c. Maintaining proper storage of protective clothing and equipment.

d. Monitoring the workers for signs of heat stress, cold stress, and fatigue.

e. Monitoring on-site hazards and conditions.

f. Conducting periodic surveillance to evaluate effectiveness of the Site-specific Health and Safety Plan.

g. Having knowledge of emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

h. Providing handouts to all on-site personnel that contain directions to the hospital and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

i. Notifying, when necessary, local public emergency officials.

j. Coordinating emergency medical care.

The Site Manager will be responsible for ensuring that the field personnel are familiar with the contents of this plan and the roles of the SSHC.

3.0 Health and Safety Risk Analysis

Table B-1 breaks down the hazard types that may be encountered for the site activities.

Table B-1
Site Investigation Activity Hazard Evaluation

Activity	Hazard Type					
	Mechanical	**Electrical**	**Chemical**	**Physical**	**Biological**	**Temperature**
Excavation of Impacted Soils	Accidental injury from excavation equipment. Accidental injury from contact with excavated materials.	Overhead power lines.	Accidental inhalation, ingestions, skin absorption or eye contact with contaminants. Inhalation of equipment exhaust gases.	Collapse of excavation structure. Puncture from buried objects/nails. Excessive noise. Fall hazards. Falling objects.	Rodents, Bees and wasps.	Heat stress and frost bite.

3.1 Chemical Hazards

Site soils have been impacted by historic industrial operations at the site. These impacts are largely related to the use of petroleum products and coal at the site. The contaminants that have been detected at the site are listed in Table B-2 and their properties are listed in Table B-3 (below).

Table B-2 – Contaminants Detected in Soil

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-A1	SS-A2	SS-A3	SS-A5	SS-A6	SS-A8	SS-A9
Parcel A										
2-Methylnaphthalene	*410*	*NS*	*NS*	57 J	**410 J**	130 J	**700 J**	3,500 U	**890 J**	**11,000 J**
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,300**	**6,000**	**5,500**	**4,500**	**1,800 J**	**24,000**	**160,000**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,700**	**6,700**	**6,800**	**4,200**	**2,100 J**	**21,000**	**140,000**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**3,100**	**12,000**	**14,000**	**6,700**	**4,400**	**25,000**	**170,000**
Benzo(G,H,I)Perylene	*100,000*	*100,000*	*500,000*	600 J	2,300	3,100	1,300	1,500 J	14,000	**98,000**
Benzo(k)Fluoranthene	*1,000*	*3,900*	*56,000*	**1,400**	**4,000**	**5,100**	**3,000**	**2,100 J**	**11,000**	**71,000**
Chrysene	*1,000*	*3,900*	*56,000*	**1,700**	**6,600**	**6,700**	**4,400**	**2,600 J**	**23,000**	**150,000**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	210 J	**820 J**	**880 J**	**370 J**	3,500 U	4,900 U	9,800 U
Dibenzofuran	*14,000*	*59,000*	*350,000*	31 J	710 J	260 J	1,100	3,500 U	2,300 J	**22,000**
Fluoranthene	*100,000*	*100,000*	*500,000*	1,800	11,000	8,700	9,900	2,700 J	44,000	**330,000**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**570 J**	**2,200**	**2,800**	**1,200**	**1,400 J**	**11,000**	**84,000**
Phenanthrene	*100,000*	*100,000*	*500,000*	600 J	9,100	4,600	9,300	1,300 J	35,000	**290,000**
Pyrene	*100,000*	*100,000*	*500,000*	1,700	8,800	7,100	7,400	2,200 J	40,000	**310,000**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-B3	SS-B4	SS-B5	SS-B6	SS-B8
Parcel B								
2-Methylnaphthalene	*410*	*NS*	*NS*	18,000 U	**620 J**	27 J	12 J	3,900 U
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**960 J**	**13,000**	850	**1,400**	**2,900 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,000 J**	**15,000**	**1,100**	**1,500**	**4,100**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	18,000 U	**20,000**	**1,300**	**3,900**	**5,000**
Benzo(k)Fluoranthene	*1,000*	*1,000*	*56,000*	18,000 U	**6,800**	480	**1,500**	**2,800 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,000 J**	**13,000**	890	**2,100**	**3,300 J**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	18,000 U	**7,700**	**550**	**1,600**	**2,100 J**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-C1	SS-C2	SS-C4	SS-C6	SS-C9
Parcel C								
2-Methylnaphthalene	*410*	*NS*	*NS*	6,900 U	7,000 U	**440 J**	65 J	2,000 U
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,500 J**	**4,600 J**	**49,000**	**3,900**	**1,500 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,700 J**	**6,400 J**	**43,000**	**3,700**	**1,600 J**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**2,000 J**	**9,600 J**	**50,000**	**4,500**	**2,000**
Benzo(k)Fluoranthene	*1,000*	*1,000*	*56,000*	**2,100 J**	**3,500 J**	**29,000**	**1,700 J**	**1,100 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,500 J**	**4,900 J**	**46,000**	**3,900**	**1,600 J**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	6,900 U	7,000 U	9,500 U	**680 J**	2,000 U
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**880 J**	**3,600 J**	**22,000**	**2,100**	**800 J**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Arsenic	Copper	Lead
Part 375 Residential	*16*	*270*	*400*
Part 375 Restricted Residential	*16*	*270*	*400*
Part 375 Commercial	*16*	*270*	*1,000*
Sample Location			
SS-A2	**18.8**	**723 J**	**1530**
SS-A3 / DUP-03	**32.1 / 19.6 J**	92.3 J/ 317 J	**897** / 298
SS-A9	**15.6 J**	67.3	95
SS-B3	**79.7 J**	15.7	16.4
SS-C7	**24.5**	37.9	8.8

J = Indicates an estimated value detected below the reporting limit.
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
All units are in mg/Kg

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	**Part 375 Restricted Residential**	**Part 375 Commercial**	SB-A1	SB-A2 / DUP-03	SB-A3
Parcel A						
2-Methylnaphthalene	*410*	*NS*	*NS*	**3,200 J**	48 J / 36 J	150 J
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**14,000**	**2,000 J / 1,300 J**	**1,800**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**14,000**	**1,900 J / 1,300 J**	**1,600**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**17,000**	**2,500 J / 1,400 J**	**1,800**
Chrysene	*1,000*	*1,000*	*56,000*	**15,000**	**2,000 J / 1,300 J**	**1,700**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	**2,800 J**	**370 J /** 220	280
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**8,400**	**1,100 J / 650 J**	**850**

All units are in µg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SB-B2 /	DUP-02-SB	SB-B3
Parcel B						
2-Methylnaphthalene	*410*	*NS*	*NS*	**860 J /**	**890 J**	55 J
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**13,000 /**	**13,000**	**3,800**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**13,000 /**	**13,000**	**3,900**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**14,000 /**	**15,000**	**5,600**
Chrysene	*1,000*	*1,000*	*56,000*	**12,000 /**	**13,000**	**5,000**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	**2,400 /**	**2,200**	400 U
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**7,000 /**	**6,400**	**2,700**

All units are in μg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SB-C3
Parcel C				
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,200 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,200 J**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**1,300 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,200 J**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**700 J**

All units are in μg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-3 - Assessment of Detected Chemicals

Chemical Name (or class)	REL/PEL/TLV	Other Pertinent Limits (Specify)	Warning Properties – Odor Threshold	Potential Exposure Pathways	Acute Health Effects	Chronic Health Effects
#1 Fuel Oil (Kerosene)	100 mg/m3 (NIOSH)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
#2 Fuel Oil	5 mg/m3 (OSHA)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
#4 Fuel Oil	5 mg/m3 (OSHA)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
Polynuclear Aromatic Hydrocarbons (Coal components)	0.1 mg/m3 (NIOSH) 0.2 mg/m3 (OSHA)		Black, dark brown residue	Inhalation, Ingestion, Contact	Skin irritation	Respiratory system; skin, bladder; kidneys
Arsenic				Inhalation, Ingestion, Contact	Skin irritation	Eyes; skin; respiratory system; CNS; kidneys; GI tract; repro system
Copper	1 mg/m3 (OSHA, NIOSH)		Reddish metal	Inhalation, Ingestion, Contact	Eye irritation	Eyes; skin; respiratory system; liver; kidneys;
Lead	0.050 mg/m3 (OSHA, NIOSH)		Gray metal	Inhalation, Ingestion, Contact		Eyes; CNS; kidneys; GI tract; blood

PEL = OSHA Permissible Exposure Limit; represents the maximum allowable 8-hr. time weighted average (TWA) airborne exposure concentration.
TLV = ACGIH Threshold Limit Value; represents the maximum recommended 8-hr. TWA exposure concentration.
STEL = OSHA Short-term Exposure Limit; represents the maximum allowable 15 minute TWA exposure concentration.
TLV-STEL = ACGIH Short-term Exposure Limit; represents the maximum recommended 15 minute TWA exposure concentration.

3.2 Physical Hazards

Physical hazards associated with the site are:

1. *Slip, Trip, and Fall During All Activities (Uneven Terrain):* The site contains numerous potential safety hazards such as pits, broken glass, slippery surfaces and fire debris. The work itself may be a potential safety hazard. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.
2. *Excavation Debris:* Excavation projects pose potential safety hazards from materials falling from the excavator as they are removed from the working excavation. The excavation work is a potential safety hazard and the SSHC will provide oversight during demolition activities.
3. *Moving Parts of Heavy Equipment:* Heavy equipment poses dangers though moving parts. Where feasible, access to moving parts will be guarded and equipment will be equipped with backup alarms.
4. *Noise from Heavy Equipment:* Work around large equipment often creates excess noise. Engineering controls and personal protective equipment will be used to protect employees' hearing.
5. *Electrical Hazards:* As in all site work, overhead power lines, buried power lines, electrical wires and cables, site electrical equipment, and lightning also pose a potential hazard to site workers. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.
6. *Biological Hazards (Insects, Poison Ivy, etc.):* Other biological hazards that may be present at the site include rodents and insects. PPE can reduce the potential for exposure. The SSHC can assist in determining the correct PPE for the hazard present.

3.3 Heat and Cold Stress

Workers will be routinely observed by the SSHC for symptoms of heat stress or cold exposure, as dictated by the weather conditions and work being conducted. Heat stress and cold exposure can be avoided by periodic, regular rest breaks.

Heat stress may be a potential hazard for personnel wearing PPE, particularly working in hot and humid conditions. Workers should take regular rest breaks within a shaded area, removing their PPE, and drink electrolyte replacing liquids and/or water. The SSHC is responsible for scheduling the amount of time each individual can work under the existing site conditions, and how often and how long they will break. Workers will be required to take their breaks in the clean zone after going through the decontamination area , or they may undergo partial decontamination and rest in a clean area within the decontamination area. Please refer to Section 7.2 (Site Control) of this HASP for a detailed description of the above referenced clean zone and decontamination area.

3.4 Confined Space Entry

Excavations do pose a potential confined space entry area. When an excavation becomes a confined space entry area (greater than 4 feet deep), then permit-required confined space entry procedures will be followed should the excavation need to be entered. In addition, air monitoring for oxygen deficiency, LEL, and organic vapors will be performed should the excavation be greater than 4 feet deep. Attempts will be made to collect samples from the excavation without entering the excavation (i.e., from excavator bucket, sampling rods, etc.).

4.0 Medical Surveillance Program

4.1 General

OSHA in 29 CFR 1910.120, the Hazardous Waste Operations regulations and in 1910.134, the Respiratory Protection regulations, requires medical examinations. The examination may include the OSHA required Medical Questionnaire, Respirator Suitability Form, a Medical Examination, Audiology Test, Pulmonary Function Test, and testing for complete blood count and chemistry profile.

These medical examinations and procedures are performed by or under the supervision of a licensed physician. The medical monitoring is provided to workers free of cost, without loss of pay and at a reasonable time and place. In addition, the need to implement a more comprehensive medical surveillance program will be re-evaluated after an apparent over-exposure incident.

Employees who wear, or may wear, respiratory protection will be provided respirators as regulated by 29 CFR 1910.134 before performing designated duties. Prior to issuance of a respirator, a medical professional must have medically certified the individual's ability to wear respiratory protection. Where the medical requirements of 29 CFR 1910.120 overlap those of 29 CFR 1910.134, the more stringent of the two will be enforced. It is not anticipated the respirator use will be required at the site.

4.2 Frequency

1. *Baseline Examinations:* Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive a baseline examination prior to job assignment.

2. *Periodic Examinations:* Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive periodic examinations as required.

3. *Termination Examinations:* Field employees permanently leaving the company who were in the medical surveillance program will receive an exit examination.

4. *Possible Exposure Examinations:* As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that an employee has been injured or exposed above the permissible exposure limits in an emergency situation, that employee will be required to receive medical attention.

4.3 Examination Results

A letter must be received from the attending physician stating the parameters of the examination and whether or not the individual is able to work with or without restriction. This letter will be filed in the employee's file and a copy distributed to the employee. The examining physician makes a report to B&L of any medical condition that would place B&L employees at increased risk when wearing a respirator of other personal protective equipment. B&L maintains the medical records of personnel, as regulated by 29 CFR 1910.120 and 29 CFR 1910.1020, where applicable.

5.0 Training Program

5.1 Hazardous Waste Operations Health and Safety Training

Employees who are assigned to perform duties on hazardous waste sites will receive the OSHA initial 40-hour health and safety training prior to on-site activities, in accordance with 29 CFR 1910.120 (e). In addition, such personnel provide documentation of having received three (3) days of supervised field experience applicable to this site, or receive three (3) days of supervised field experience at this site. Applicable employees will receive yearly 8-hour refresher courses. On-site managers and supervisors who are directly responsible for or who supervise workers engaged in hazardous waste operations receive, in addition to the appropriate level of worker HAZWOPER training described above, 8 (eight) additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4).

Because this site is meets the definition of a hazardous waste site, employees who work during field activities are required to have completed HAZWOPER initial and refresher training.

5.2 Additional Training

As site activities change, supplemental training will be provided to employees to address changes in identified hazards, risks, operations procedures, emergency response, site control, and personal protective equipment. Specialty training will be provided as determined by task and responsibility.

Site-specific training will be provided to each employee and will be reviewed at safety briefings. Specialized training will be provided as dictated by the nature of site activities. Specialized training will be provided for activities such as the handling of unidentified substances. Employees involved in these types of activities will be given off-site instruction regarding the potential hazards involved with such activities and the appropriate health and safety procedures to be followed. Off-site instruction is meant to include any areas where employees will not be exposed to site hazards.

5.3 Other Required Training

Other training that may be required by workers that is in addition to required training described above is detailed below:

- Hazard communication, in accordance with 29 CFR 1910.1200
- Respirator use, in accordance with 29 CFR 1910.134
- Hearing conservation, in accordance with 29 CFR 1910.95
- Working safely around heavy equipment
- Heat and cold stress prevention
- Confined space entry, in accordance with 289 CFR 1910.146

5.4 Pre-Entry Briefing

A site-specific briefing will be provided to all individuals, including site visitors, who enter this site beyond the site entry point. For visitors, the site-specific briefing provides information about site hazards, the site lay-out including work zones and places of refuge, the emergency alarm system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

The SSHC will brief personnel as to the potential hazards likely to be encountered. Topics will include:

- Availability of this HASP.
- General site hazards and specific hazards in the work areas, including those attributable to the chemicals present.
- Selection, use, testing and care of the body, eye, hand and foot protection being worn, with the limitations of each.
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the site.
- Emergency response procedures and requirements.
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed.
- Methods to obtain emergency assistance and medical attention.

5.5 Training Records

Written certification of the successful completion of applicable training requirements for each worker will be maintained on-site during the course of the investigation. Written certificates have been given to each person so certified. Additionally, an employee sign off sheet indicating that each worker has reviewed a copy of this HASP and understands its contents is stored at the same location.

6.0 Health and Safety Field Implementation

6.1 Personal Protective Equipment Requirements

The requirements for personal protective equipment (PPE) are outlined in Table B-4. Level D protection will initially be worn for excavation activities. Level C protection may be used, based upon a sustained (five (5) minutes or more) readings above five (5) parts per million (ppm) measured with the photoionization detector (PID). The emissions from gasoline or diesel-powered excavation equipment may affect PID readings. At the start of work (excavation equipment in operation, but prior to exposing contaminated soils), an ambient PID reading will be established. This ambient PID reading will be subtracted from subsequent readings to evaluate PPE usage.

Table B-4
Personal Protective Equipment (PPE) Requirements

Job Tasks	Level of Protection	PPE						
		Suit	Gloves	Feet	Head	Eye	Ear	Respirator
Down-grade	Modified D	Std.	Neoprene or Nitrile	Steel + Booties	HH	Glasses/ Goggles	Plugs/ Muffs	N/A
All on-site	C	PE Tyvek	Neoprene or Nitrile	Steel + Booties	HH	N/A	Plugs/ Muffs	Full APR w/OV& N100

Personal Protective Equipment

SUIT:
Std = Standard Work Clothes
PE Tyvek = Polyethylene-coated Tyvek

FEET:
Steel = Steel-toe Boots
Booties = PVC or Latex Booties

HEAD:
HH = Hard Hat

EYE:
Glasses = Safety Glasses w/side shields
Goggles = Safety Goggles

Personal Protective Equipment

EAR:
Plugs = Ear Plugs
Muffs = Ear Muffs

RESPIRATOR:
APR = Air-purifying respirator
Full APR = Full-face APR
OV = Organic vapor cartridge
N100 = N100 particulate filters

6.2 Community Air Monitoring Plan

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.

This 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 as part of the IRM. 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**.** The various field instruments that will be used by on-site personnel to perform the continuous air monitoring are listed in Table B-5 below. Subsurface intrusive activities include, but are not limited to, soil excavation and handling.

VOCs will be monitored at the downwind perimeter of the site, outside the existing building on a continuous basis with the use of a Photoionization detector (PID). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the site exceeds five (5) parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below five (5) ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the site persist at levels in excess of five (5) ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below five (5) ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the site, activities must be shutdown.

All 15-minute readings will be recorded and made available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision making purposes will also be recorded.

Particulate concentrations will also be monitored continuously at the upwind and downwind perimeters of the exclusion zone or work area during the performance of the IRM. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques if downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and if no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume if dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and made available for NYSDEC and NYSDOH personnel to review.

Table B-5
Monitoring Protocols and Contaminant Action Levels

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Breathing Zone* Action Level Concentrations	
			Monitored Level For Mandatory Respirator Use**	Monitored Level For Mandatory Work Stoppages***
VOCs	Photoionization detector (PID) with an 10.6 eV lamp	Initially readings will be recorded every 15 minutes. If no sustained readings are obtained in the breathing zone, readings will be recorded every 30 minutes.	5 ppm above background	25 ppm above background

Table B-5
Monitoring Protocols and Contaminant Action Levels

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Breathing Zone* Action Level Concentrations	
			Monitored Level For Mandatory Respirator Use**	Monitored Level For Mandatory Work Stoppages***
Particulates	MiniRam or Dusttrak or Equivalent	Continuously during intrusive activities that can generate dust, e.g. monitoring well installation, test pits		150 ug/m3 at fence line (institute engineering controls to control dust) per NYSDEC TAGM 4031

* Monitoring performed in the breathing zone for sustained readings of 5 minutes or more. Monitor source first; if the source is near or above the action level concentration, monitor in the breathing zone.
** Monitored levels will require the use of approved respiratory protection specified in Table B-3.
*** Consult the Site manager.

6.3 Decontamination Procedures

Depending on the specific job task, decontamination may include personnel themselves, tools, and/or heavy equipment. The specified level of protection for a task (A, B, C, or D) does not itself define the extent of personal protection or equipment decontamination. For instance, Level C without dermal hazards will require less decontamination than Level C with dermal hazards. Heavy equipment will always require decontamination to prevent cross-contamination. The following sections summarize general decontamination protocols.

6.3.1 Heavy Equipment

Heavy equipment will be decontaminated prior to personnel decontamination. Heavy equipment, drilling rods, augers and/or buckets will be steam cleaned after use at the designated decontamination area. In addition, containment systems will be set-up at the designated decontamination area for collection of decon fluids and materials.

6.3.2 Personnel

In general, decontamination involves scrubbing with a non-phosphate soap/water solution followed by clean water rinses. Disposable items will be disposed of in a dry container.

Reusable protection will be washed with soap and clean potable water and air-dried prior to storage. Dirt, oil, grease or other foreign materials that are visible will be removed from surfaces. Scrubbing with a brush may be required to remove materials that adhere to the surfaces. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may be discarded in a designated container. Rubber components can be soaked in soap and water and scrubbed with a brush.

The following decontamination protocol will be used, as appropriate to the level of PPE being used:

- Drop hand tools and equipment in the designated decontamination area.
- Either wash outer rubber boots or dispose of booties.
- Rinse outer boots.
- Wash and rinse outer gloves.
- Remove outer boots and gloves, dispose gloves if necessary in the container designated for PPE waste.
- Replace cartridges if required.
- Remove and dispose Tyvek coverall in the designated PPE waste container.
- Remove respirator, dispose cartridges as required in the container designated for PPE waste.
- Personnel should wash their respirator at the end of each workday.

6.3.3 Decontamination Wastes and Investigation Derived Wastes

Decontamination wash and rinse waters and investigation derived wastes (IDW) will be managed according to applicable regulatory guidelines.

- Spent decon solutions may be required to be drummed and disposed of as hazardous waste and/or solvent solutions may be required to be segregated from water rinses.
- Decontamination shall be performed in a manner that minimizes the amount of waste generated.
- IDW may be required to be drummed and disposed of as hazardous waste.

7.0 Site Operating Procedures

These following guidelines comply with the established guidelines of the Barton & Loguidice, P.C., Corporate Health and Safety Program:

All field investigation activities must be coordinated through the Site Manager.

During any activity conducted on-site in which a potential exists for exposure to hazardous materials, accident or injury, at least two (2) persons must be present who are in constant communication with each other. At least two (2) persons must also be present during all demolition or excavation activities.

Samples obtained from areas known or suspected to contain contaminated substances or materials must be handled with appropriate personal protection equipment.

All equipment used to conduct the Site Investigation must be properly decontaminated and maintained in good working order. Equipment must be inspected for signs of defects and/or contamination before and after each use.

The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated will result in the evacuation of the activity zone until a complete evaluation of the hazard can be performed.

7.1 Daily Operating Procedures

The following are the daily operating procedures that are to be followed by on-site personnel:

- Hold Tailgate Safety Meetings prior to work start and as needed thereafter (suggest daily; however, minimum of weekly).
- Use monitoring instruments and follow designated protocol and contaminant action levels.
- Use PPE as specified.
- Use hearing protection around heavy equipment.
- Remain upwind of operations and airborne contaminants, if possible.
- Establish a work/rest regimen when ambient temperatures and protective clothing create potential thermal hazards.
- Eating, drinking, applying cosmetics and smoking are prohibited in work areas.
- Refer to the SSHC for specific safety concerns for each individual site task.
- On-site personnel are encouraged to be alert to their own physical condition, as well as their co-workers.
- **All accidents, no matter how minor,** must be immediately reported to the SSHC.

7.2 Site Control

The purpose of site control is to minimize the exposure of site workers to potential contamination, protect the public from the site's hazards, and prevent vandalism. The degree of site control necessary depends on site characteristics and the surrounding community. At this time, there are no access restrictions to the site. During the field activities, Barton & Loguidice, P.C. (B&L), and Steel Treaters are requesting that personnel, subcontractors and visitors report to the on-site B&L supervisor prior to entering the work area.

Since there are no access restrictions to the Site, particular attention will be placed on the condition of the site regarding three (3) main work zone areas:

Activity Zone

This zone applies to the immediate work area and includes all materials, equipment, vehicles and personnel involved in the site activity. For example, during the installation of a monitoring well, the activity zone will encompass the borehole, drilling rig, monitoring well construction materials and equipment, sampling equipment, decontamination supplies, and drilling/well inspection personnel. Site control measures will include flagging the perimeter of the activity zone to clearly mark the limits of work and to warn passers-by and visitors of the site activity. In addition, the site supervisor will maintain communication with City personnel as the location of this zone (and the type of work being performed) changes throughout the project.

The required level of PPE in the activity zone can vary according to job assignment. This will allow a flexible, effective, and less costly operation, while still maintaining a high degree of safety.

This area will be limited to authorized personnel from B&L, regulatory agencies, and contractors/subcontractors to the B&L and/or Steel Treaters. Personnel entering this area will be required to comply with their own HASP that is at least as stringent as this HASP.

Decontamination Zone

In order to prevent incidental contact with contaminants on investigation equipment or in the wash water, activities within the decontamination area will be completed before subsequent site work or other activity begins. This includes:

- Complete removal of contaminants on all equipment used during the preceding phase of the investigation;
- Placement of the waste wash water and sediment in sealed drums;
- Storage of the drums in a secure and out-of-the-way place for future disposal;
- Proper labeling of drum contents;
- Cleanup (if necessary) of area outside of decontamination area; and

Support Zone

The support zone is the location of the administrative and other support functions needed to keep the operations in the activity and decontamination zone running smoothly. Any function that need not or cannot be performed in a hazardous atmosphere is performed here. Personnel may wear normal work clothes within this zone. Any potentially contaminated clothing, equipment and samples must remain in the decontamination zone until decontaminated. All emergency telephone numbers, change for the telephone (if necessary), evacuation route maps, and vehicle keys should be kept in the support zone.

The SSHC will establish a decontamination system and decontamination procedures appropriate to the site and the work that will prevent potentially hazardous materials from leaving the site. All personnel exiting the activity zone will be decontaminated prior to entering the support zone. The decontamination procedures will be reviewed at each daily safety briefing.

Personal hygiene facilities meeting at least the minimum requirements of 29 CFR Part 1910.120 will be provided nearby.

Upon completion of the day's activities, heavy machinery and equipment will be stored securely within the site, or at a location selected by the SSHC.

7.3 Buddy System

Most activities in a contaminated or otherwise hazardous area should be conducted with a partner who is able to:

- Provide his or her partner with assistance.
- Observe his or her partner for signs of chemical or heat exposure.
- Periodically check the integrity of his or her partner's protective clothing.
- Notify the SSHC if emergency help is needed.

7.4 Engineering Controls

Engineering controls and work practices are primarily for limiting exposure through application of engineered barriers. They will be applied to this project when and where they are practicable. The following engineering controls may be applied on this project: water spray, covering of materials, site preparation to facilitate operations and remove obvious physical hazards, and warning alarms/devices.

8.0 Emergency Response Procedures

8.1 Pre-Emergency Planning

Planning for emergencies is a crucial part of emergency response. The SSHC is responsible for training all employees in potential site hazards and the emergency response procedures.

8.2 Personnel Roles

The SSHC is responsible for responding to, or coordinating the response of, off-site personnel to emergencies. In the event of an emergency, the SSHC will direct all notification, response and follow-up actions. Contacts with outside response personnel (hospital, fire department, etc.) will be done at the direction of the SSHC.

Prior to the start of work on the site, the SSHC will:

1. Notify emergency contacts, and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the activities performed on-site;
2. Confirm that the following safety equipment is available: eyewash and safety shower station, first aid supplies, air horn, and fire extinguishers;
3. Have a working knowledge of the safety equipment available; and
4. Confirm directions to the hospital are prominently posted with the emergency telephone numbers.

Employees who will respond to emergencies involving hazardous materials will be trained in how to respond to such emergencies.

The SSHC will check daily to see that the following safety equipment is available at the site: eyewash station, first aid supplies, and fire extinguisher.

The SSHC will be responsible for directing notification, response and follow-up actions and for contacting outside response personnel (ambulance, fire department or others) prior to and during an emergency. Upon notification of an exposure incident, the SSHC will call the Hospital and fire and police emergency response personnel for recommended medical diagnosis, treatment, if necessary, and transportation to the hospital.

The SSHC must conduct an investigation of the incident as soon as possible. The SSHC will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring. The resulting report must be accurate, objective, complete and signed and dated.

8.3 Safe Distances and Places of Refuge

In case of an emergency, a designated off-site area will serve as the immediate place of refuge. Personnel in the exclusion zone should evacuate through the decontamination zone to the refuge location, both for their own personal safety and to prevent hampering response/rescue efforts. Following an evacuation, the SSHC will account for on-site personnel. If evacuation from the work site is necessary, the project vehicles will be used to transport on-site personnel to a place of refuge.

8.4 Emergency Communications

There will be a cellular telephone located in either the Site Manager's and/or SSHC's vehicle for emergency use. Emergency telephone numbers are listed in Attachment 7 of this HASP. There will be air horns, walkie-talkies, and/or other audible emergency signals located within the exclusion zone and decontamination area to signal others of an emergency. The SSHC should brief all personnel regarding audible emergency signals to be used during the site activities prior to starting the work. Site personnel will use the following hand signals to inform others of emergencies:

- Hand gripping throat - out of air, cannot breathe.
- Grip partner's wrist or both hands around waist - leave area immediately.
- Hands on top of head - need assistance.
- Thumbs up - everything's OK, or I understand.
- Thumbs down – No.

8.5 Emergency Procedures

The nature of work at a contaminated or potentially contaminated work site makes emergencies a continual possibility. Although emergencies are unlikely and occur infrequently, a contingency plan is required to assure timely and appropriate response actions. The contingency plan is reviewed at tailgate safety meetings.

8.5.1 Incident Procedures

If an emergency incident occurs, the following actions will be taken:

1. Size-up the situation based upon available information.
2. Notify the SSHC.
3. Only respond to an emergency if personnel are sufficiently trained and properly equipped.
4. As appropriate, evacuate site personnel and notify emergency response agencies, e.g., police, fire, etc.

5. As necessary, request assistance from outside sources and/or allocate personnel and equipment resources for the response.
6. Consult the posted emergency telephone list and contact key project personnel.
7. Prepare an incident report.

All site personnel should be aware of the location of fire fighting equipment. Personnel shall only extinguish minor fires. Large fires will require contacting the local fire department and allowing them to handle the fire. The local fire department will be contacted prior to initiating site activities to inform them of the potential hazardous materials that could be encountered in an emergency.

8.5.2 Medical Emergencies

In the event of an accident or injury, workers will immediately implement emergency decontamination and isolation measures to assist those who have been injured or exposed and to protect others from the hazards. Upon notification of an exposure incident, the SSHC will contact the emergency response personnel who can provide medical diagnosis and treatment. If necessary, immediate medical care will be provided by trained personnel competent in first aid procedures. Trained personnel competent in such matters will only provide other on-site medical and/or first aid response to an injury or illness.

If an individual is transported to a hospital or doctor, a copy of this HASP will accompany the individual.

The SSHC will be notified when an accident or incident occurs and will respond according to the seriousness of the incident. The SSHC will investigate facility/site conditions to determine whether and at what levels exposure actually occurred, the cause of such exposure and the means to be taken to prevent the incident from recurring.

The SSHC and the exposed individual will complete an exposure-incident investigation. The SSHC will prepare a signed and dated report documenting the investigation. The SSHC and the exposed individual will also complete an exposure-incident reporting form. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

Emergency first aid may include taking care of minor scrapes to performing CPR. All site personnel should be familiar with the location of the site first aid kits. The site safety officer should be trained in first aid and CPR. Contacting hospital and/or emergency agencies shall be made on a case by case basis depending on the severity of the injury. If an off-site emergency agency is contacted, all the details relating to the injury should be relayed to that agency. All site injuries should be documented. The following actions should be taken if someone requires first aid:

1. Survey the scene to determine if it is safe to reach the injured person.

2. Ask the injured person what happened. If the person is unconscious, look for signs as to what may have occurred.
3. See if there are others injured.
4. Reassure the victim. Contact others for help; tell them to call the appropriate emergency agency.
5. If it is safe to move the victim, return them back to the field office.

Only trained personnel should perform CPR or rescue breathing on an unconscious victim.

Personnel who experience heat stress or frost bite should be attended to in the following manner:

Heat Stress - Symptoms include cool, pale and moist skin, heavy sweating, headache, and nausea. This person should be removed from the hot environment immediately, and allowed to lie on their back. Apply cold packs or make sure they are in an air-conditioned room. Give them plenty of water and/or electrolyte-replacing fluids. Should a victim experience heat stroke (high body temperature, red skin) the body must be cooled down quickly and receive medical attention immediately. Persons experiencing heat stress or heat stroke should be attended to until the situation has been remedied.

Frostbite - Symptoms include slightly flushed skin that becomes white, pain at extremities in early stages. Get a victim experiencing frostbite to a warm area and put the frostbitten parts in warm (100-105º F) water. Loosely bandage injured parts after soaking.

Hypothermia - Under conditions of cold temperatures and high winds, there is the potential for workers experiencing hypothermia. Signs of hypothermia include: shivering, dizziness, numbness, confusion, or drowsiness. Warm up this person's body with dry clothes and a blanket, if available. Call the appropriate emergency agency or take this person to the hospital.

8.6 Emergency Routes

Should an emergency signal be sounded, on-site personnel should immediately stop what they are doing, and return to the decontamination area. Personnel in the decontamination area and the support zone should evaluate the emergency and contact the appropriate off site emergency personnel. Once on site personnel return to the decontamination area, there will be someone there to direct them as to what to do. It is imperative that the SSHC or designated alternate account for all site personnel. The SSHC should direct all personnel to the nearest safe refuge.

The hospital route is included as an attachment.

If the emergency event threatens the surrounding community, it is important that the local police and fire departments be contacted immediately regarding the potential danger.

8.7 Spill Control

A major spill is not anticipated at the site. Should a spill of any type occur, the employee should report it immediately to the SSHC, who will make arrangements for the proper cleanup of the spill. These arrangements will include diking and ditching, as necessary, as well as the use of absorbents such as vermiculite or Speedi Dry. The emergency response personnel will be contacted immediately by SSHC in the event that on-site materials can not immediately contain the spill.

8.8 Personal Protective and Emergency Equipment

There will be suitable equipment on site for small emergency events such as additional PPE, fire extinguishers and first aid kits. In the event of a major emergency event, off-site personnel will be contacted immediately.

8.9 Decontamination Procedures

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Minimum decontamination will consist of detergent washing, rinsing, and removal of contaminated outer clothing and equipment. If time does not permit the completion of all of these actions, it is acceptable to remove the contaminated clothing without washing it. If the situation is such that the contaminated clothing cannot be removed, the person should be given required first aid treatment, and then wrapped in plastic or a blanket prior to transport to medical care. If heat stress is a factor in the victim's illness/injury, the outer protective garment will be removed immediately.

8.10 Evacuation Routes

Unless otherwise directed, evacuation will be made through the decon area to the designated refuge location for a head count.

8.11 Response Critique

Should an incident on-site occur, the SSHC will analyze the response efforts in order to continually improve on-site conditions and procedures. The SSHC must complete follow-up activities before on-site work is resumed following an emergency. Used emergency equipment must be recharged, refilled or replaced. Government agencies must be notified as required in their regulations.

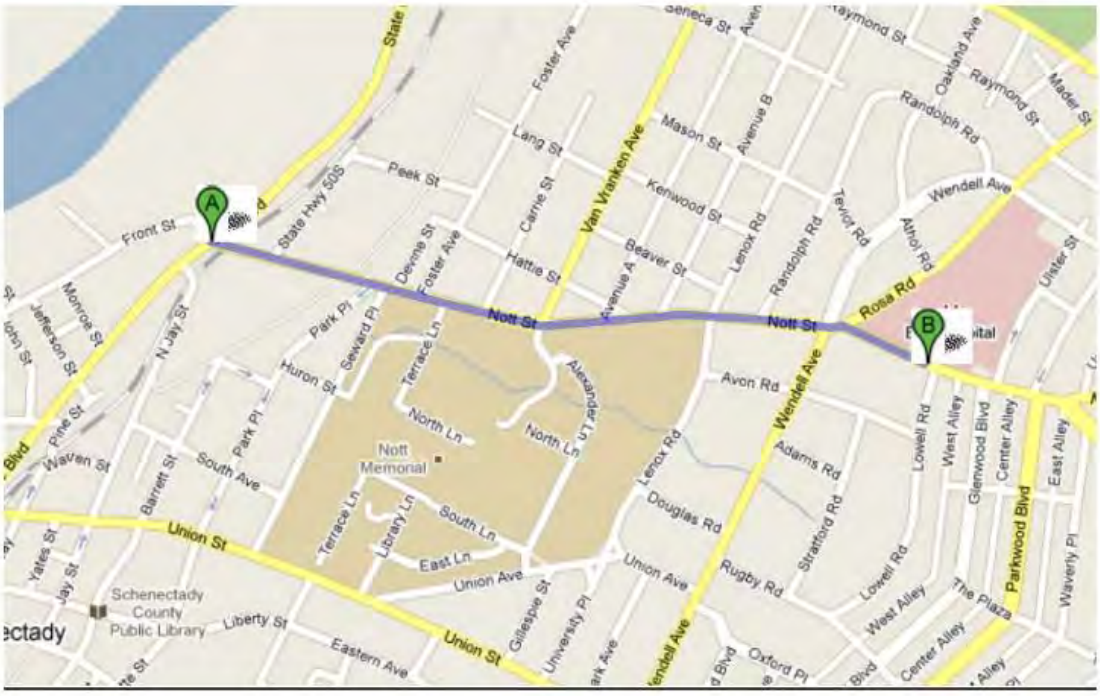
Attachment 1

Driving directions to Ellis Hospital
1.0 mi – about **2 mins**

A 301 Nott St
Schenectady, NY 12305

1. Head **east** on **Nott St** toward **Erie Blvd/Maxon Rd** 1.0 mi
Destination will be on the left

B Ellis Hospital
1101 Nott St
Schenectady, NY



(This should be posted at a conspicuous location at the site.)

Attachment 2

Emergency Contacts
(To Be Posted)

Contact	Person or Agency	Phone Number
Maxon-ALCO Holdings LLC	Steve Luciano	(518) 356-4445
NYSDEC Region 4 Project Manager	John Strang	(518) 357-2390
Law Enforcement	(C) Schenectady PD	911
Fire Department	(C) Schenectady FD	911
Confined Space Rescue (Fire Department)	(C) Schenectady FD	911
Ambulance		911
Hospital - Emergency	Ellis Hospital	(518) 243-4000
B&L Site Manager/Site Safety Officer	Andrew J Barber	(518) 218-1801
B&L Officer-in-Charge	Scott D. Nostrand, P.E.	(315) 457-5200

Appendix B

Approved UST Addendum to Excavation WP (12/04/14)

Addendum to the Excavation Work Plan (EXC-WP) dated May 2014
Former ALCO Site
Site Nos. C447042, C447043, and C447044
New York State Brownfield Cleanup Program

November 2014

This addendum to the approved Excavation Work Plan (Exc-WP) for the ALCO site has been prepared to address the underground storage tanks (USTs) that have been uncovered as part of the site development work being performed under the (Exc-WP), as well as USTs that may be uncovered in the future.

The USTs will be removed in accordance with 6NYCRR Parts 611-612 and DER-10 Section 5.5. The following steps will be used for tank removal.

- Break up and remove the concrete pad overlying the tanks, if present.
- Excavate around the tanks to expose their full length and width. Screen soil as it is removed and place stockpiled soil on a plastic sheet.
- Measure vapor concentrations in the tank with a portable meter capable of measuring the specific petroleum vapors in the range of the Lower Explosive Limit (LEL). No cutting will begin until vapor concentrations are below 10% of the LEL. If needed, the tank will be ventilated to reach the necessary limit.
- Determine whether tanks have been filled with solids (e.g. – soil, flowfill). If tanks have been filled with solids, cut and remove the upper part of the tank to access contents. Remove free liquids by pumping or vacuum truck, and containerize the liquids. Remove solids from the tank using a backhoe or other appropriate means, and place the solids into lined roll-offs, bermed soil staging areas or other appropriate containers. Sample and analyze solids and liquids for analytical parameters required by the disposal facility.
- Cut tanks into workable sections.
- Remove tank sections from the excavation and clean as needed; contain rinseate.
- Transport tank sections to local scrap yard following NYSDEC inspection and approval.
- Inspect the excavation for indications of tank leakage.
- If impacted soils are encountered, excavate and stockpile impacted soils on a separate soil storage area that is lined with plastic sheeting and bermed to prohibit run-off.
- Excavation will be continued vertically and laterally until the impacted soils have been removed (with NYSDEC concurrence).
- Backfill the excavation with approved on-site fill.

Appendix E

Health and Safety Plan

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady
Schenectady County, New York

Health and Safety Plan (HASP)

New York State
Brownfield Cleanup Program
Site Nos. C447042, C447043, and C447044

December 2013

Barton & Loguidice

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady

Health and Safety Plan
Site Nos. C447042, C447043, and C447044

December 2013

Prepared For:

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Prepared By:

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Albany, New York 12205

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Attachments

1.0 General Information

1.1 Introduction

This Health and Safety Plan (HASP) was prepared by Barton & Loguidice, Inc. (B&L) for future excavation work at the former ALCO site where the existing soils will be penetrated. The existing soils contain residual impacts from historic activities at the site. The impacts were characterized by the Remedial Investigation and Supplemental Remedial Investigation that were conducted at the site. A summary of the impacts is provided in this HASP

Please note that this site falls within the definition of a hazardous waste sites for the purposes of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response*. Plan. This was prepared in accordance with 29 CFR 1910.120. This plan was prepared, and will be implemented, by a qualified person as defined under 29 CFR 1910.120; this is also in accordance with NYSDEC DER-10, *Technical Guidance for Site Investigation and Remediation.*

The purpose of this Health and Safety Plan for the Steel Treaters contaminant source removal IRM is to provide specific guidelines and establish procedures for the protection of personnel during the field investigation and site remediation activities. The Plan is based on the site information available at this time and anticipated conditions to be encountered during the different phases of work. This Plan is subject to modification as data are collected and evaluated.

All personnel conducting activities on-site must comply with all applicable Federal and State rules and regulations regarding safe work practices. Personnel conducting field activities must also be familiar with the procedures, requirements and provisions of this Plan. In the event of conflicting Plans and requirements, personnel must implement those safety practices that afford the highest level of protection.

This HASP is not intended to be used by any subcontractors, but it may be used as the basis for contractors to prepare their own plans. This HASP may not address the specific health and safety needs or requirements of subcontractors and should be viewed as the minimum requirement.

2.0 Project Information

2.1 Comprehensive Work Plan

This HASP is appended to the Site Remedial Work Plan (RWP) prepared by Barton & Loguidice, Inc., which describes the proposed remedial activities for the site.

2.2 Scope of Work

Remedial and/or development activities at the site may entail excavation into the existing in-place soils at the site.

2.3 Organization Structure

Barton & Loguidice, P.C.:
Program Manager – Scott Nostrand, P.E.

Site Manager – Andy Barber
Maxon ALCO Holdings, LLC (MAH):

Project Contact – Steve Luciano

The Site Manager is responsible for the day-to-day activities of the project and for coordinating between office and field personnel. The Site Manager will oversee the remedial activities. The Barton & Loguidice on-site field personnel will serve as the Site Safety and Health Coordinator (SSHC). The SSHC will establish operating standards and coordinate overall project safety and health activities for the site. The SSHC will review project plans and revisions to determine that safety and health procedures are maintained throughout the project. Specifically the responsibilities of the SSHC include:

a. Aiding the selection of protective clothing and equipment.

b. Periodically inspecting protective clothing and equipment.

c. Maintaining proper storage of protective clothing and equipment.

d. Monitoring the workers for signs of heat stress, cold stress, and fatigue.

e. Monitoring on-site hazards and conditions.

f. Conducting periodic surveillance to evaluate effectiveness of the Site-specific Health and Safety Plan.

g. Having knowledge of emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

h. Providing handouts to all on-site personnel that contain directions to the hospital and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

i. Notifying, when necessary, local public emergency officials.

j. Coordinating emergency medical care.

The Site Manager will be responsible for ensuring that the field personnel are familiar with the contents of this plan and the roles of the SSHC.

3.0 Health and Safety Risk Analysis

Table B-1 breaks down the hazard types that may be encountered for the site activities.

Table B-1
Site Investigation Activity Hazard Evaluation

Activity	Hazard Type					
	Mechanical	**Electrical**	**Chemical**	**Physical**	**Biological**	**Temperature**
Excavation of Impacted Soils	Accidental injury from excavation equipment. Accidental injury from contact with excavated materials.	Overhead power lines.	Accidental inhalation, ingestions, skin absorption or eye contact with contaminants. Inhalation of equipment exhaust gases.	Collapse of excavation structure. Puncture from buried objects/nails. Excessive noise. Fall hazards. Falling objects.	Rodents, Bees and wasps.	Heat stress and frost bite.

3.1 Chemical Hazards

Site soils have been impacted by historic industrial operations at the site. These impacts are largely related to the use of petroleum products and coal at the site. The contaminants that have been detected at the site are listed in Table B-2 and their properties are listed in Table B-3 (below).

Table B-2 – Contaminants Detected in Soil

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-A1	SS-A2	SS-A3	SS-A5	SS-A6	SS-A8	SS-A9
Parcel A										
2-Methylnaphthalene	*410*	*NS*	*NS*	57 J	**410 J**	130 J	**700 J**	3,500 U	**890 J**	**11,000 J**
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,300**	**6,000**	**5,500**	**4,500**	**1,800 J**	**24,000**	**160,000**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,700**	**6,700**	**6,800**	**4,200**	**2,100 J**	**21,000**	**140,000**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**3,100**	**12,000**	**14,000**	**6,700**	**4,400**	**25,000**	**170,000**
Benzo(G,H,I)Perylene	*100,000*	*100,000*	*500,000*	600 J	2,300	3,100	1,300	1,500 J	14,000	**98,000**
Benzo(k)Fluoranthene	*1,000*	*3,900*	*56,000*	**1,400**	**4,000**	**5,100**	**3,000**	**2,100 J**	**11,000**	**71,000**
Chrysene	*1,000*	*3,900*	*56,000*	**1,700**	**6,600**	**6,700**	**4,400**	**2,600 J**	**23,000**	**150,000**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	210 J	**820 J**	**880 J**	**370 J**	3,500 U	4,900 U	9,800 U
Dibenzofuran	*14,000*	*59,000*	*350,000*	31 J	710 J	260 J	1,100	3,500 U	2,300 J	**22,000**
Fluoranthene	*100,000*	*100,000*	*500,000*	1,800	11,000	8,700	9,900	2,700 J	44,000	**330,000**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**570 J**	**2,200**	**2,800**	**1,200**	**1,400 J**	**11,000**	**84,000**
Phenanthrene	*100,000*	*100,000*	*500,000*	600 J	9,100	4,600	9,300	1,300 J	35,000	**290,000**
Pyrene	*100,000*	*100,000*	*500,000*	1,700	8,800	7,100	7,400	2,200 J	40,000	**310,000**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-B3	SS-B4	SS-B5	SS-B6	SS-B8
Parcel B								
2-Methylnaphthalene	*410*	*NS*	*NS*	18,000 U	**620 J**	27 J	12 J	3,900 U
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**960 J**	**13,000**	850	**1,400**	**2,900 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,000 J**	**15,000**	**1,100**	**1,500**	**4,100**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	18,000 U	**20,000**	**1,300**	**3,900**	**5,000**
Benzo(k)Fluoranthene	*1,000*	*1,000*	*56,000*	18,000 U	**6,800**	480	**1,500**	**2,800 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,000 J**	**13,000**	890	**2,100**	**3,300 J**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	18,000 U	**7,700**	**550**	**1,600**	**2,100 J**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-C1	SS-C2	SS-C4	SS-C6	SS-C9
Parcel C								
2-Methylnaphthalene	*410*	*NS*	*NS*	6,900 U	7,000 U	**440 J**	65 J	2,000 U
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,500 J**	**4,600 J**	**49,000**	**3,900**	**1,500 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,700 J**	**6,400 J**	**43,000**	**3,700**	**1,600 J**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**2,000 J**	**9,600 J**	**50,000**	**4,500**	**2,000**
Benzo(k)Fluoranthene	*1,000*	*1,000*	*56,000*	**2,100 J**	**3,500 J**	**29,000**	**1,700 J**	**1,100 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,500 J**	**4,900 J**	**46,000**	**3,900**	**1,600 J**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	6,900 U	7,000 U	9,500 U	**680 J**	2,000 U
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**880 J**	**3,600 J**	**22,000**	**2,100**	**800 J**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Arsenic	Copper	Lead
Part 375 Residential	*16*	*270*	*400*
Part 375 Restricted Residential	*16*	*270*	*400*
Part 375 Commercial	*16*	*270*	*1,000*
Sample Location			
SS-A2	**18.8**	**723 J**	**1530**
SS-A3 / DUP-03	**32.1 / 19.6 J**	92.3 J/ 317 J	**897** / 298
SS-A9	**15.6 J**	67.3	95
SS-B3	**79.7 J**	15.7	16.4
SS-C7	**24.5**	37.9	8.8

J = Indicates an estimated value detected below the reporting limit.
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
All units are in mg/Kg

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	**Part 375 Restricted Residential**	**Part 375 Commercial**	SB-A1	SB-A2 / DUP-03	SB-A3
Parcel A						
2-Methylnaphthalene	*410*	*NS*	*NS*	**3,200 J**	48 J / 36 J	150 J
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**14,000**	**2,000 J / 1,300 J**	**1,800**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**14,000**	**1,900 J / 1,300 J**	**1,600**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**17,000**	**2,500 J / 1,400 J**	**1,800**
Chrysene	*1,000*	*1,000*	*56,000*	**15,000**	**2,000 J / 1,300 J**	**1,700**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	**2,800 J**	**370 J /** 220	280
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**8,400**	**1,100 J / 650 J**	**850**

All units are in µg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SB-B2 /	DUP-02-SB	SB-B3
Parcel B						
2-Methylnaphthalene	*410*	*NS*	*NS*	**860 J /**	**890 J**	55 J
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**13,000 /**	**13,000**	**3,800**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**13,000 /**	**13,000**	**3,900**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**14,000 /**	**15,000**	**5,600**
Chrysene	*1,000*	*1,000*	*56,000*	**12,000 /**	**13,000**	**5,000**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	**2,400 /**	**2,200**	400 U
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**7,000 /**	**6,400**	**2,700**

All units are in μg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SB-C3
Parcel C				
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,200 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,200 J**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**1,300 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,200 J**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**700 J**

All units are in μg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-3 - Assessment of Detected Chemicals

Chemical Name (or class)	REL/PEL/TLV	Other Pertinent Limits (Specify)	Warning Properties – Odor Threshold	Potential Exposure Pathways	Acute Health Effects	Chronic Health Effects
#1 Fuel Oil (Kerosene)	100 mg/m3 (NIOSH)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
#2 Fuel Oil	5 mg/m3 (OSHA)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
#4 Fuel Oil	5 mg/m3 (OSHA)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
Polynuclear Aromatic Hydrocarbons (Coal components)	0.1 mg/m3 (NIOSH) 0.2 mg/m3 (OSHA)		Black, dark brown residue	Inhalation, Ingestion, Contact	Skin irritation	Respiratory system; skin, bladder; kidneys
Arsenic				Inhalation, Ingestion, Contact	Skin irritation	Eyes; skin; respiratory system; CNS; kidneys; GI tract; repro system
Copper	1 mg/m3 (OSHA, NIOSH)		Reddish metal	Inhalation, Ingestion, Contact	Eye irritation	Eyes; skin; respiratory system; liver; kidneys;
Lead	0.050 mg/m3 (OSHA, NIOSH)		Gray metal	Inhalation, Ingestion, Contact		Eyes; CNS; kidneys; GI tract; blood

PEL = OSHA Permissible Exposure Limit; represents the maximum allowable 8-hr. time weighted average (TWA) airborne exposure concentration.
TLV = ACGIH Threshold Limit Value; represents the maximum recommended 8-hr. TWA exposure concentration.
STEL = OSHA Short-term Exposure Limit; represents the maximum allowable 15 minute TWA exposure concentration.
TLV-STEL = ACGIH Short-term Exposure Limit; represents the maximum recommended 15 minute TWA exposure concentration.

3.2 Physical Hazards

Physical hazards associated with the site are:

1. *Slip, Trip, and Fall During All Activities (Uneven Terrain):* The site contains numerous potential safety hazards such as pits, broken glass, slippery surfaces and fire debris. The work itself may be a potential safety hazard. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.
2. *Excavation Debris:* Excavation projects pose potential safety hazards from materials falling from the excavator as they are removed from the working excavation. The excavation work is a potential safety hazard and the SSHC will provide oversight during demolition activities.
3. *Moving Parts of Heavy Equipment:* Heavy equipment poses dangers though moving parts. Where feasible, access to moving parts will be guarded and equipment will be equipped with backup alarms.
4. *Noise from Heavy Equipment:* Work around large equipment often creates excess noise. Engineering controls and personal protective equipment will be used to protect employees' hearing.
5. *Electrical Hazards:* As in all site work, overhead power lines, buried power lines, electrical wires and cables, site electrical equipment, and lightning also pose a potential hazard to site workers. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.
6. *Biological Hazards (Insects, Poison Ivy, etc.):* Other biological hazards that may be present at the site include rodents and insects. PPE can reduce the potential for exposure. The SSHC can assist in determining the correct PPE for the hazard present.

3.3 Heat and Cold Stress

Workers will be routinely observed by the SSHC for symptoms of heat stress or cold exposure, as dictated by the weather conditions and work being conducted. Heat stress and cold exposure can be avoided by periodic, regular rest breaks.

Heat stress may be a potential hazard for personnel wearing PPE, particularly working in hot and humid conditions. Workers should take regular rest breaks within a shaded area, removing their PPE, and drink electrolyte replacing liquids and/or water. The SSHC is responsible for scheduling the amount of time each individual can work under the existing site conditions, and how often and how long they will break. Workers will be required to take their breaks in the clean zone after going through the decontamination area , or they may undergo partial decontamination and rest in a clean area within the decontamination area. Please refer to Section 7.2 (Site Control) of this HASP for a detailed description of the above referenced clean zone and decontamination area.

3.4 Confined Space Entry

Excavations do pose a potential confined space entry area. When an excavation becomes a confined space entry area (greater than 4 feet deep), then permit-required confined space entry procedures will be followed should the excavation need to be entered. In addition, air monitoring for oxygen deficiency, LEL, and organic vapors will be performed should the excavation be greater than 4 feet deep. Attempts will be made to collect samples from the excavation without entering the excavation (i.e., from excavator bucket, sampling rods, etc.).

4.0 Medical Surveillance Program

4.1 General

OSHA in 29 CFR 1910.120, the Hazardous Waste Operations regulations and in 1910.134, the Respiratory Protection regulations, requires medical examinations. The examination may include the OSHA required Medical Questionnaire, Respirator Suitability Form, a Medical Examination, Audiology Test, Pulmonary Function Test, and testing for complete blood count and chemistry profile.

These medical examinations and procedures are performed by or under the supervision of a licensed physician. The medical monitoring is provided to workers free of cost, without loss of pay and at a reasonable time and place. In addition, the need to implement a more comprehensive medical surveillance program will be re-evaluated after an apparent over-exposure incident.

Employees who wear, or may wear, respiratory protection will be provided respirators as regulated by 29 CFR 1910.134 before performing designated duties. Prior to issuance of a respirator, a medical professional must have medically certified the individual's ability to wear respiratory protection. Where the medical requirements of 29 CFR 1910.120 overlap those of 29 CFR 1910.134, the more stringent of the two will be enforced. It is not anticipated the respirator use will be required at the site.

4.2 Frequency

1. *Baseline Examinations:* Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive a baseline examination prior to job assignment.

2. *Periodic Examinations:* Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive periodic examinations as required.

3. *Termination Examinations:* Field employees permanently leaving the company who were in the medical surveillance program will receive an exit examination.

4. *Possible Exposure Examinations:* As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that an employee has been injured or exposed above the permissible exposure limits in an emergency situation, that employee will be required to receive medical attention.

4.3 Examination Results

A letter must be received from the attending physician stating the parameters of the examination and whether or not the individual is able to work with or without restriction. This letter will be filed in the employee's file and a copy distributed to the employee. The examining physician makes a report to B&L of any medical condition that would place B&L employees at increased risk when wearing a respirator of other personal protective equipment. B&L maintains the medical records of personnel, as regulated by 29 CFR 1910.120 and 29 CFR 1910.1020, where applicable.

5.0 Training Program

5.1 Hazardous Waste Operations Health and Safety Training

Employees who are assigned to perform duties on hazardous waste sites will receive the OSHA initial 40-hour health and safety training prior to on-site activities, in accordance with 29 CFR 1910.120 (e). In addition, such personnel provide documentation of having received three (3) days of supervised field experience applicable to this site, or receive three (3) days of supervised field experience at this site. Applicable employees will receive yearly 8-hour refresher courses. On-site managers and supervisors who are directly responsible for or who supervise workers engaged in hazardous waste operations receive, in addition to the appropriate level of worker HAZWOPER training described above, 8 (eight) additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4).

Because this site is meets the definition of a hazardous waste site, employees who work during field activities are required to have completed HAZWOPER initial and refresher training.

5.2 Additional Training

As site activities change, supplemental training will be provided to employees to address changes in identified hazards, risks, operations procedures, emergency response, site control, and personal protective equipment. Specialty training will be provided as determined by task and responsibility.

Site-specific training will be provided to each employee and will be reviewed at safety briefings. Specialized training will be provided as dictated by the nature of site activities. Specialized training will be provided for activities such as the handling of unidentified substances. Employees involved in these types of activities will be given off-site instruction regarding the potential hazards involved with such activities and the appropriate health and safety procedures to be followed. Off-site instruction is meant to include any areas where employees will not be exposed to site hazards.

5.3 Other Required Training

Other training that may be required by workers that is in addition to required training described above is detailed below:

- Hazard communication, in accordance with 29 CFR 1910.1200
- Respirator use, in accordance with 29 CFR 1910.134
- Hearing conservation, in accordance with 29 CFR 1910.95
- Working safely around heavy equipment
- Heat and cold stress prevention
- Confined space entry, in accordance with 289 CFR 1910.146

5.4 Pre-Entry Briefing

A site-specific briefing will be provided to all individuals, including site visitors, who enter this site beyond the site entry point. For visitors, the site-specific briefing provides information about site hazards, the site lay-out including work zones and places of refuge, the emergency alarm system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

The SSHC will brief personnel as to the potential hazards likely to be encountered. Topics will include:

- Availability of this HASP.
- General site hazards and specific hazards in the work areas, including those attributable to the chemicals present.
- Selection, use, testing and care of the body, eye, hand and foot protection being worn, with the limitations of each.
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the site.
- Emergency response procedures and requirements.
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed.
- Methods to obtain emergency assistance and medical attention.

5.5 Training Records

Written certification of the successful completion of applicable training requirements for each worker will be maintained on-site during the course of the investigation. Written certificates have been given to each person so certified. Additionally, an employee sign off sheet indicating that each worker has reviewed a copy of this HASP and understands its contents is stored at the same location.

6.0 Health and Safety Field Implementation

6.1 Personal Protective Equipment Requirements

The requirements for personal protective equipment (PPE) are outlined in Table B-4. Level D protection will initially be worn for excavation activities. Level C protection may be used, based upon a sustained (five (5) minutes or more) readings above five (5) parts per million (ppm) measured with the photoionization detector (PID). The emissions from gasoline or diesel-powered excavation equipment may affect PID readings. At the start of work (excavation equipment in operation, but prior to exposing contaminated soils), an ambient PID reading will be established. This ambient PID reading will be subtracted from subsequent readings to evaluate PPE usage.

Table B-4
Personal Protective Equipment (PPE) Requirements

Job Tasks	Level of Protection	PPE						
		Suit	Gloves	Feet	Head	Eye	Ear	Respirator
Down-grade	Modified D	Std.	Neoprene or Nitrile	Steel + Booties	HH	Glasses/ Goggles	Plugs/ Muffs	N/A
All on-site	C	PE Tyvek	Neoprene or Nitrile	Steel + Booties	HH	N/A	Plugs/ Muffs	Full APR w/OV& N100

Personal Protective Equipment

SUIT:
Std = Standard Work Clothes
PE Tyvek = Polyethylene-coated Tyvek

FEET:
Steel = Steel-toe Boots
Booties = PVC or Latex Booties

HEAD:
HH = Hard Hat

EYE:
Glasses = Safety Glasses w/side shields
Goggles = Safety Goggles

Personal Protective Equipment

EAR:
Plugs = Ear Plugs
Muffs = Ear Muffs

RESPIRATOR:
APR = Air-purifying respirator
Full APR = Full-face APR
OV = Organic vapor cartridge
N100 = N100 particulate filters

6.2 Community Air Monitoring Plan

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.

This 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 as part of the IRM. 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**.** The various field instruments that will be used by on-site personnel to perform the continuous air monitoring are listed in Table B-5 below. Subsurface intrusive activities include, but are not limited to, soil excavation and handling.

VOCs will be monitored at the downwind perimeter of the site, outside the existing building on a continuous basis with the use of a Photoionization detector (PID). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the site exceeds five (5) parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below five (5) ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the site persist at levels in excess of five (5) ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below five (5) ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the site, activities must be shutdown.

All 15-minute readings will be recorded and made available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision making purposes will also be recorded.

Particulate concentrations will also be monitored continuously at the upwind and downwind perimeters of the exclusion zone or work area during the performance of the IRM. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques if downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and if no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume if dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and made available for NYSDEC and NYSDOH personnel to review.

Table B-5
Monitoring Protocols and Contaminant Action Levels

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Breathing Zone* Action Level Concentrations	
			Monitored Level For Mandatory Respirator Use**	Monitored Level For Mandatory Work Stoppages***
VOCs	Photoionization detector (PID) with an 10.6 eV lamp	Initially readings will be recorded every 15 minutes. If no sustained readings are obtained in the breathing zone, readings will be recorded every 30 minutes.	5 ppm above background	25 ppm above background

Table B-5
Monitoring Protocols and Contaminant Action Levels

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Breathing Zone* Action Level Concentrations	
			Monitored Level For Mandatory Respirator Use**	Monitored Level For Mandatory Work Stoppages***
Particulates	MiniRam or Dusttrak or Equivalent	Continuously during intrusive activities that can generate dust, e.g. monitoring well installation, test pits		150 ug/m3 at fence line (institute engineering controls to control dust) per NYSDEC TAGM 4031

* Monitoring performed in the breathing zone for sustained readings of 5 minutes or more. Monitor source first; if the source is near or above the action level concentration, monitor in the breathing zone.
** Monitored levels will require the use of approved respiratory protection specified in Table B-3.
*** Consult the Site manager.

6.3 Decontamination Procedures

Depending on the specific job task, decontamination may include personnel themselves, tools, and/or heavy equipment. The specified level of protection for a task (A, B, C, or D) does not itself define the extent of personal protection or equipment decontamination. For instance, Level C without dermal hazards will require less decontamination than Level C with dermal hazards. Heavy equipment will always require decontamination to prevent cross-contamination. The following sections summarize general decontamination protocols.

6.3.1 Heavy Equipment

Heavy equipment will be decontaminated prior to personnel decontamination. Heavy equipment, drilling rods, augers and/or buckets will be steam cleaned after use at the designated decontamination area. In addition, containment systems will be set-up at the designated decontamination area for collection of decon fluids and materials.

6.3.2 Personnel

In general, decontamination involves scrubbing with a non-phosphate soap/water solution followed by clean water rinses. Disposable items will be disposed of in a dry container.

Reusable protection will be washed with soap and clean potable water and air-dried prior to storage. Dirt, oil, grease or other foreign materials that are visible will be removed from surfaces. Scrubbing with a brush may be required to remove materials that adhere to the surfaces. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may be discarded in a designated container. Rubber components can be soaked in soap and water and scrubbed with a brush.

The following decontamination protocol will be used, as appropriate to the level of PPE being used:

- Drop hand tools and equipment in the designated decontamination area.
- Either wash outer rubber boots or dispose of booties.
- Rinse outer boots.
- Wash and rinse outer gloves.
- Remove outer boots and gloves, dispose gloves if necessary in the container designated for PPE waste.
- Replace cartridges if required.
- Remove and dispose Tyvek coverall in the designated PPE waste container.
- Remove respirator, dispose cartridges as required in the container designated for PPE waste.
- Personnel should wash their respirator at the end of each workday.

6.3.3 Decontamination Wastes and Investigation Derived Wastes

Decontamination wash and rinse waters and investigation derived wastes (IDW) will be managed according to applicable regulatory guidelines.

- Spent decon solutions may be required to be drummed and disposed of as hazardous waste and/or solvent solutions may be required to be segregated from water rinses.
- Decontamination shall be performed in a manner that minimizes the amount of waste generated.
- IDW may be required to be drummed and disposed of as hazardous waste.

7.0 Site Operating Procedures

These following guidelines comply with the established guidelines of the Barton & Loguidice, P.C., Corporate Health and Safety Program:

All field investigation activities must be coordinated through the Site Manager.

During any activity conducted on-site in which a potential exists for exposure to hazardous materials, accident or injury, at least two (2) persons must be present who are in constant communication with each other. At least two (2) persons must also be present during all demolition or excavation activities.

Samples obtained from areas known or suspected to contain contaminated substances or materials must be handled with appropriate personal protection equipment.

All equipment used to conduct the Site Investigation must be properly decontaminated and maintained in good working order. Equipment must be inspected for signs of defects and/or contamination before and after each use.

The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated will result in the evacuation of the activity zone until a complete evaluation of the hazard can be performed.

7.1 Daily Operating Procedures

The following are the daily operating procedures that are to be followed by on-site personnel:

- Hold Tailgate Safety Meetings prior to work start and as needed thereafter (suggest daily; however, minimum of weekly).
- Use monitoring instruments and follow designated protocol and contaminant action levels.
- Use PPE as specified.
- Use hearing protection around heavy equipment.
- Remain upwind of operations and airborne contaminants, if possible.
- Establish a work/rest regimen when ambient temperatures and protective clothing create potential thermal hazards.
- Eating, drinking, applying cosmetics and smoking are prohibited in work areas.
- Refer to the SSHC for specific safety concerns for each individual site task.
- On-site personnel are encouraged to be alert to their own physical condition, as well as their co-workers.
- **All accidents, no matter how minor,** must be immediately reported to the SSHC.

7.2 Site Control

The purpose of site control is to minimize the exposure of site workers to potential contamination, protect the public from the site's hazards, and prevent vandalism. The degree of site control necessary depends on site characteristics and the surrounding community. At this time, there are no access restrictions to the site. During the field activities, Barton & Loguidice, P.C. (B&L), and Steel Treaters are requesting that personnel, subcontractors and visitors report to the on-site B&L supervisor prior to entering the work area.

Since there are no access restrictions to the Site, particular attention will be placed on the condition of the site regarding three (3) main work zone areas:

Activity Zone

This zone applies to the immediate work area and includes all materials, equipment, vehicles and personnel involved in the site activity. For example, during the installation of a monitoring well, the activity zone will encompass the borehole, drilling rig, monitoring well construction materials and equipment, sampling equipment, decontamination supplies, and drilling/well inspection personnel. Site control measures will include flagging the perimeter of the activity zone to clearly mark the limits of work and to warn passers-by and visitors of the site activity. In addition, the site supervisor will maintain communication with City personnel as the location of this zone (and the type of work being performed) changes throughout the project.

The required level of PPE in the activity zone can vary according to job assignment. This will allow a flexible, effective, and less costly operation, while still maintaining a high degree of safety.

This area will be limited to authorized personnel from B&L, regulatory agencies, and contractors/subcontractors to the B&L and/or Steel Treaters. Personnel entering this area will be required to comply with their own HASP that is at least as stringent as this HASP.

Decontamination Zone

In order to prevent incidental contact with contaminants on investigation equipment or in the wash water, activities within the decontamination area will be completed before subsequent site work or other activity begins. This includes:

- Complete removal of contaminants on all equipment used during the preceding phase of the investigation;
- Placement of the waste wash water and sediment in sealed drums;
- Storage of the drums in a secure and out-of-the-way place for future disposal;
- Proper labeling of drum contents;
- Cleanup (if necessary) of area outside of decontamination area; and

Support Zone

The support zone is the location of the administrative and other support functions needed to keep the operations in the activity and decontamination zone running smoothly. Any function that need not or cannot be performed in a hazardous atmosphere is performed here. Personnel may wear normal work clothes within this zone. Any potentially contaminated clothing, equipment and samples must remain in the decontamination zone until decontaminated. All emergency telephone numbers, change for the telephone (if necessary), evacuation route maps, and vehicle keys should be kept in the support zone.

The SSHC will establish a decontamination system and decontamination procedures appropriate to the site and the work that will prevent potentially hazardous materials from leaving the site. All personnel exiting the activity zone will be decontaminated prior to entering the support zone. The decontamination procedures will be reviewed at each daily safety briefing.

Personal hygiene facilities meeting at least the minimum requirements of 29 CFR Part 1910.120 will be provided nearby.

Upon completion of the day's activities, heavy machinery and equipment will be stored securely within the site, or at a location selected by the SSHC.

7.3 Buddy System

Most activities in a contaminated or otherwise hazardous area should be conducted with a partner who is able to:

- Provide his or her partner with assistance.
- Observe his or her partner for signs of chemical or heat exposure.
- Periodically check the integrity of his or her partner's protective clothing.
- Notify the SSHC if emergency help is needed.

7.4 Engineering Controls

Engineering controls and work practices are primarily for limiting exposure through application of engineered barriers. They will be applied to this project when and where they are practicable. The following engineering controls may be applied on this project: water spray, covering of materials, site preparation to facilitate operations and remove obvious physical hazards, and warning alarms/devices.

8.0 Emergency Response Procedures

8.1 Pre-Emergency Planning

Planning for emergencies is a crucial part of emergency response. The SSHC is responsible for training all employees in potential site hazards and the emergency response procedures.

8.2 Personnel Roles

The SSHC is responsible for responding to, or coordinating the response of, off-site personnel to emergencies. In the event of an emergency, the SSHC will direct all notification, response and follow-up actions. Contacts with outside response personnel (hospital, fire department, etc.) will be done at the direction of the SSHC.

Prior to the start of work on the site, the SSHC will:

1. Notify emergency contacts, and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the activities performed on-site;
2. Confirm that the following safety equipment is available: eyewash and safety shower station, first aid supplies, air horn, and fire extinguishers;
3. Have a working knowledge of the safety equipment available; and
4. Confirm directions to the hospital are prominently posted with the emergency telephone numbers.

Employees who will respond to emergencies involving hazardous materials will be trained in how to respond to such emergencies.

The SSHC will check daily to see that the following safety equipment is available at the site: eyewash station, first aid supplies, and fire extinguisher.

The SSHC will be responsible for directing notification, response and follow-up actions and for contacting outside response personnel (ambulance, fire department or others) prior to and during an emergency. Upon notification of an exposure incident, the SSHC will call the Hospital and fire and police emergency response personnel for recommended medical diagnosis, treatment, if necessary, and transportation to the hospital.

The SSHC must conduct an investigation of the incident as soon as possible. The SSHC will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring. The resulting report must be accurate, objective, complete and signed and dated.

8.3 Safe Distances and Places of Refuge

In case of an emergency, a designated off-site area will serve as the immediate place of refuge. Personnel in the exclusion zone should evacuate through the decontamination zone to the refuge location, both for their own personal safety and to prevent hampering response/rescue efforts. Following an evacuation, the SSHC will account for on-site personnel. If evacuation from the work site is necessary, the project vehicles will be used to transport on-site personnel to a place of refuge.

8.4 Emergency Communications

There will be a cellular telephone located in either the Site Manager's and/or SSHC's vehicle for emergency use. Emergency telephone numbers are listed in Attachment 7 of this HASP. There will be air horns, walkie-talkies, and/or other audible emergency signals located within the exclusion zone and decontamination area to signal others of an emergency. The SSHC should brief all personnel regarding audible emergency signals to be used during the site activities prior to starting the work. Site personnel will use the following hand signals to inform others of emergencies:

- Hand gripping throat - out of air, cannot breathe.
- Grip partner's wrist or both hands around waist - leave area immediately.
- Hands on top of head - need assistance.
- Thumbs up - everything's OK, or I understand.
- Thumbs down – No.

8.5 Emergency Procedures

The nature of work at a contaminated or potentially contaminated work site makes emergencies a continual possibility. Although emergencies are unlikely and occur infrequently, a contingency plan is required to assure timely and appropriate response actions. The contingency plan is reviewed at tailgate safety meetings.

8.5.1 Incident Procedures

If an emergency incident occurs, the following actions will be taken:

1. Size-up the situation based upon available information.
2. Notify the SSHC.
3. Only respond to an emergency if personnel are sufficiently trained and properly equipped.
4. As appropriate, evacuate site personnel and notify emergency response agencies, e.g., police, fire, etc.

5. As necessary, request assistance from outside sources and/or allocate personnel and equipment resources for the response.
6. Consult the posted emergency telephone list and contact key project personnel.
7. Prepare an incident report.

All site personnel should be aware of the location of fire fighting equipment. Personnel shall only extinguish minor fires. Large fires will require contacting the local fire department and allowing them to handle the fire. The local fire department will be contacted prior to initiating site activities to inform them of the potential hazardous materials that could be encountered in an emergency.

8.5.2 Medical Emergencies

In the event of an accident or injury, workers will immediately implement emergency decontamination and isolation measures to assist those who have been injured or exposed and to protect others from the hazards. Upon notification of an exposure incident, the SSHC will contact the emergency response personnel who can provide medical diagnosis and treatment. If necessary, immediate medical care will be provided by trained personnel competent in first aid procedures. Trained personnel competent in such matters will only provide other on-site medical and/or first aid response to an injury or illness.

If an individual is transported to a hospital or doctor, a copy of this HASP will accompany the individual.

The SSHC will be notified when an accident or incident occurs and will respond according to the seriousness of the incident. The SSHC will investigate facility/site conditions to determine whether and at what levels exposure actually occurred, the cause of such exposure and the means to be taken to prevent the incident from recurring.

The SSHC and the exposed individual will complete an exposure-incident investigation. The SSHC will prepare a signed and dated report documenting the investigation. The SSHC and the exposed individual will also complete an exposure-incident reporting form. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

Emergency first aid may include taking care of minor scrapes to performing CPR. All site personnel should be familiar with the location of the site first aid kits. The site safety officer should be trained in first aid and CPR. Contacting hospital and/or emergency agencies shall be made on a case by case basis depending on the severity of the injury. If an off-site emergency agency is contacted, all the details relating to the injury should be relayed to that agency. All site injuries should be documented. The following actions should be taken if someone requires first aid:

1. Survey the scene to determine if it is safe to reach the injured person.

2. Ask the injured person what happened. If the person is unconscious, look for signs as to what may have occurred.
3. See if there are others injured.
4. Reassure the victim. Contact others for help; tell them to call the appropriate emergency agency.
5. If it is safe to move the victim, return them back to the field office.

Only trained personnel should perform CPR or rescue breathing on an unconscious victim.

Personnel who experience heat stress or frost bite should be attended to in the following manner:

Heat Stress - Symptoms include cool, pale and moist skin, heavy sweating, headache, and nausea. This person should be removed from the hot environment immediately, and allowed to lie on their back. Apply cold packs or make sure they are in an air-conditioned room. Give them plenty of water and/or electrolyte-replacing fluids. Should a victim experience heat stroke (high body temperature, red skin) the body must be cooled down quickly and receive medical attention immediately. Persons experiencing heat stress or heat stroke should be attended to until the situation has been remedied.

Frostbite - Symptoms include slightly flushed skin that becomes white, pain at extremities in early stages. Get a victim experiencing frostbite to a warm area and put the frostbitten parts in warm (100-105º F) water. Loosely bandage injured parts after soaking.

Hypothermia - Under conditions of cold temperatures and high winds, there is the potential for workers experiencing hypothermia. Signs of hypothermia include: shivering, dizziness, numbness, confusion, or drowsiness. Warm up this person's body with dry clothes and a blanket, if available. Call the appropriate emergency agency or take this person to the hospital.

8.6 Emergency Routes

Should an emergency signal be sounded, on-site personnel should immediately stop what they are doing, and return to the decontamination area. Personnel in the decontamination area and the support zone should evaluate the emergency and contact the appropriate off site emergency personnel. Once on site personnel return to the decontamination area, there will be someone there to direct them as to what to do. It is imperative that the SSHC or designated alternate account for all site personnel. The SSHC should direct all personnel to the nearest safe refuge.

The hospital route is included as an attachment.

If the emergency event threatens the surrounding community, it is important that the local police and fire departments be contacted immediately regarding the potential danger.

8.7 Spill Control

A major spill is not anticipated at the site. Should a spill of any type occur, the employee should report it immediately to the SSHC, who will make arrangements for the proper cleanup of the spill. These arrangements will include diking and ditching, as necessary, as well as the use of absorbents such as vermiculite or Speedi Dry. The emergency response personnel will be contacted immediately by SSHC in the event that on-site materials can not immediately contain the spill.

8.8 Personal Protective and Emergency Equipment

There will be suitable equipment on site for small emergency events such as additional PPE, fire extinguishers and first aid kits. In the event of a major emergency event, off-site personnel will be contacted immediately.

8.9 Decontamination Procedures

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Minimum decontamination will consist of detergent washing, rinsing, and removal of contaminated outer clothing and equipment. If time does not permit the completion of all of these actions, it is acceptable to remove the contaminated clothing without washing it. If the situation is such that the contaminated clothing cannot be removed, the person should be given required first aid treatment, and then wrapped in plastic or a blanket prior to transport to medical care. If heat stress is a factor in the victim's illness/injury, the outer protective garment will be removed immediately.

8.10 Evacuation Routes

Unless otherwise directed, evacuation will be made through the decon area to the designated refuge location for a head count.

8.11 Response Critique

Should an incident on-site occur, the SSHC will analyze the response efforts in order to continually improve on-site conditions and procedures. The SSHC must complete follow-up activities before on-site work is resumed following an emergency. Used emergency equipment must be recharged, refilled or replaced. Government agencies must be notified as required in their regulations.

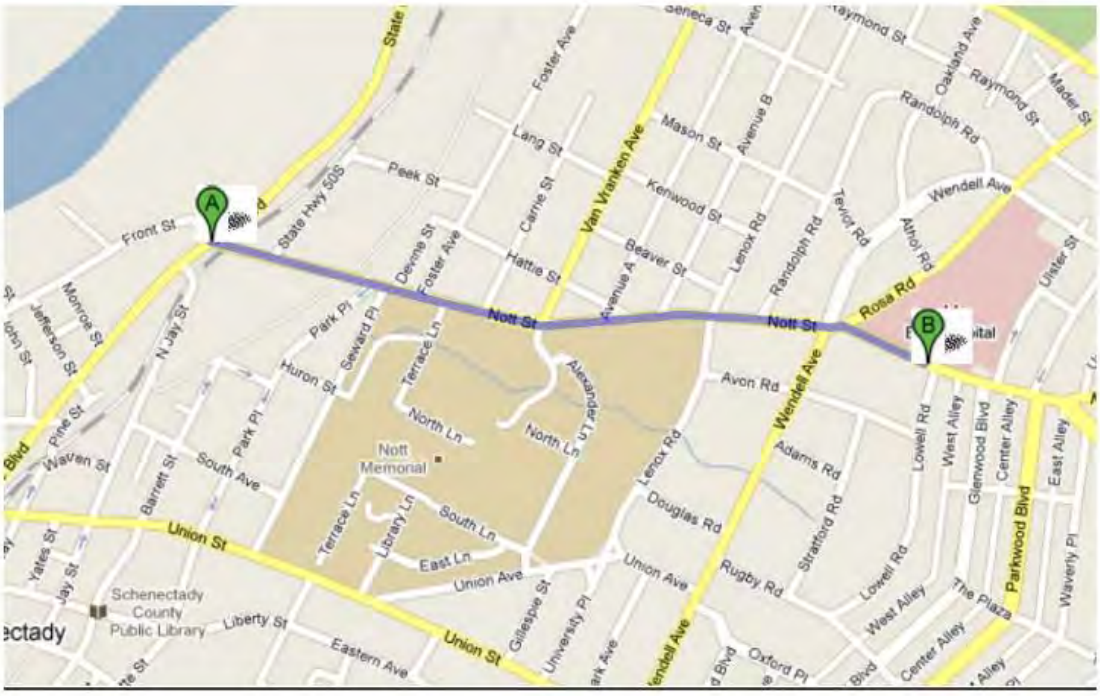
Attachment 1

Driving directions to Ellis Hospital
1.0 mi – about **2 mins**

A 301 Nott St
Schenectady, NY 12305

1. Head **east** on **Nott St** toward **Erie Blvd/Maxon Rd** 1.0 mi
Destination will be on the left

B Ellis Hospital
1101 Nott St
Schenectady, NY



(This should be posted at a conspicuous location at the site.)

Attachment 2

Emergency Contacts
(To Be Posted)

Contact	Person or Agency	Phone Number
Maxon-ALCO Holdings LLC	Steve Luciano	(518) 356-4445
NYSDEC Region 4 Project Manager	John Strang	(518) 357-2390
Law Enforcement	(C) Schenectady PD	911
Fire Department	(C) Schenectady FD	911
Confined Space Rescue (Fire Department)	(C) Schenectady FD	911
Ambulance		911
Hospital - Emergency	Ellis Hospital	(518) 243-4000
B&L Site Manager/Site Safety Officer	Andrew J Barber	(518) 218-1801
B&L Officer-in-Charge	Scott D. Nostrand, P.E.	(315) 457-5200

Appendix F

Quality Assurance Project Plan

Former ALCO Site
Parcels A, B, and C
NYSDEC Site Numbers:
C447042, C447043, and C447044

City of Schenectady, New York

Quality Assurance Project Plan

July 2016

Barton & Loguidice

Former ALCO Site
Parcels A, B, and C
NYSDEC Site Numbers: C447042, C447043, and C447044

Schenectady County
City of Schenectady, NY

Quality Assurance Project Plan

July 2016

Prepared For:

Maxon ALCO Holdings, LLC
695 Rotterdam Industrial Park
Schenectady, NY 12306

Prepared By:

Barton & Loguidice, Inc.
10 Airline Drive, Suite 200
Albany, New York 12205

Table of Contents

Section Page

Attachments

1.0 Introduction

This document presents the Quality Assurance Project Plan (QAPP) for use in implementing required sampling and analysis activities under the Site Management Plan (SMP) . The QAPP outlines the field sampling quality assurance/quality control mechanisms.

2.0 Quality Assurance/Quality Control

2.1 Record Keeping and Chain-of-Custody Documentation

The sampler's field records will contain sufficient information such that someone else can reconstruct the sampling situation without reliance on the sampler's memory. Entries in the field records will include, at a minimum, the following:

- Site name and location
- Project number
- Name and affiliation of Project Manager and sampler involved
- Sampling point name and description
- Type of sample container(s) used
- Preservative(s) used
- Well purging procedures and equipment
- Well-specific data including water level, depth and volume purged
- Sample collection procedure and equipment
- Date and time of collection
- Sample identification number(s)
- Laboratory's sample identification number(s)
- References such as maps or photographs of the sampling site, if available
- Field observations
- Pertinent weather factors such as temperature, wind direction and precipitation
- Any field measurements made, including pH, Eh, temperature, turbidity and dissolved oxygen

The field sampling data sheet is presented as an Appendix to the Site's Site Management Plan.

Chain-of-custody records for all samples will be maintained. A sample will be considered to be "in custody" of any individual if said sample is either in direct view of or otherwise directly controlled by that individual. Storage of samples during custody will be accomplished according to established preservation techniques, in appropriately sealed and numbered containers. Chain-of-custody will be accomplished when the samples are directly

transferred from one individual to the next, with the first individual witnessing the signature of the recipient on the chain-of-custody record.

The chain-of-custody records will contain the following information:

- Respective sample numbers of the laboratory and Qualified Environmental Professional, if available
- Signature of the collector
- Date and time of collection
- Sample type (e.g., groundwater, sediment)
- Identification of well or sampling point
- Number of containers
- Parameter requested for analysis
- Signature of person(s) involved in the chain of possession
- Description of sample bottles and their condition
- Problems associated with sample collection (i.e., breakage, preservatives missing), if any

A sample chain-of-custody form is presented as Attachment B.

All samples will be placed in a cooler on ice. If samples are to be hand delivered, no further measures are required. If samples are to be shipped via common carrier (e.g. Federal Express) bottle lids and labels are to be covered with clear tape, each sample bottle will be placed in a Ziploc plastic bag and individually wrapped in bubble wrap. Ice is to be double bagged. The cooler will be sealed with strapping tape and custody seals shall be place on the front and back of the cooler lid.

2.2 Field Sample QA/QC Procedures

2.2.1 Field and Trip Blanks

To monitor the integrity of field sampling and equipment cleaning techniques, the following field quality assurance/quality control (QA/QC) procedures will be adhered to for this effort.

A field blank will be prepared on-site each day that samples are collected with non-dedicated or non-disposable sampling equipment. If more than one matrix is being sampled in a given day, field blanks will be prepared for each matrix. A trip blank for water samples and/or

soil samples to be analyzed for VOCs will accompany sample containers through all phases of the sampling event to ensure proper bottle preparation and laboratory integrity. Trip blank and field blank samples will receive identical handling procedures as on-site samples.

Field and trip blanks are used as control or external QA/QC samples to detect contamination that may be introduced in the field (either atmospheric or from sampling equipment), in transit to or from the sampling site, or in the bottle preparation, sample login, or sample storage stages within the laboratory. The blanks will also show any contamination that may occur during the analytical process.

Trip blanks are samples of analyte-free water, prepared at the same location and time as the preparation of bottles that are to be used for sampling. They remain with the sample bottles while in transit to the site, during sampling, and during the return trip to the laboratory. At no time during these procedures are they to be opened. Upon return to the laboratory, they are analyzed as if they were another sample, receiving the same QA/QC procedures as ordinary field samples. If these samples are accidentally opened, it will be noted on the chain-of-custody.

Field blanks are prepared in the field (at the sampling site) using empty bottles and analyte-free water supplied separately (prepared at the same time and place as the bottles used in the sampling). The preferred procedure for collection of field blanks for non-dedicated sampling equipment is to first decontaminate the sampling device (e.g., scoop, beaker), and then pour the analyte-free water over the device and collect the runoff into the empty bottles supplied with the sample bottles.

Field and trip blanks are not part of the laboratory QA/QC procedures. The latter, used to detect contamination during analytical steps, are only included as part of the laboratory service and assess the validity of the laboratory analytical procedures. Field and trip blanks are required as part of QA/QC procedures for the overall sampling and analytical program.

2.3 Field Instrument Calibration

The on-site personnel are responsible for assuring that a master calibration/maintenance log will be maintained for each measuring device. Each log will include at least the following information where applicable:

- Name of device and/or instrument calibrated
- Device/instrument serial and/or ID number
- Frequency of calibration
- Date of calibration
- Results of calibration

- Name of person performing the calibration
- Identification of the calibration gas for PID
- Buffer solutions (pH meter)

2.4 Sample Analysis QA/QC Procedures

2.4.1 Overview

The purpose of the laboratory QA/QC program is to establish and maintain laboratory practices that will ensure the scientific reliability and comparability of the data generated in support of the project.

Quality assurance (QA) is the system for ensuring that all information, data, and resulting decisions compiled under an investigation are technically sound, statistically valid, and properly documented. Quality control (QC) is the mechanism through which quality assurance achieves its goals. Quality control programs define the frequency and methods of checks, audits, and reviews necessary to identify problems and dictate corrective action, thus high quality data.

The laboratory QA/QC program will outline the purpose, policies, organizations and operations established to support the chemical analyses.

The laboratory QA/QC procedures will be submitted as part of the laboratory selection process. The QA/QC document submitted by the laboratory will be appended to this document as Attachment A. The laboratory selected will be certified under the NYSDOH ELAP program.

2.4.2 Laboratory Selection Criteria

A laboratory will be selected that is qualified to perform the work required for the site. Examples of selection criteria are as follows:

1. Capabilities (facilities, personnel, instrumentation):
    a. Previous use
    b. Certification
    c. References (recommendations by other users of the laboratory)
2. Services:
    a. Turnaround time
    b. Completeness of reports
    c. Compliance with holding times

3. QA/QC Programs – All laboratories must have a detailed written QA/QC program meeting the minimum requirements of the NYS Department of Environmental Conservation and the NYS Department of Health, and must be NYSDOH ELAP CLP certified for all analyses being performed.
4. Approvals – All laboratories used will be approved by the Environmental Professional prior to the analysis of samples. The selected analytical laboratory will be committed to providing analytical services for groundwater, soil, sediment and surface water that are commensurate with the required protocols and current state-of-the-art analytical procedures, laboratory practices and instrumentation.

2.4.3 Data Validator Selection Criteria

A data validator will be selected based on the required qualification presented in Attachment A, and must meet Department requirements for performing data validation.

Attachment A

Data Validation Scope of Work

Attachment A
Data Validation Scope of Work

Data validation is the systematic process by which the data quality is determined with respect to data quality criteria that are defined in project and laboratory quality control programs and in the referenced analytical methods. The data validation process consists of an assessment of the acceptability or validity of project data with respect to stated project goals and requirements for data usability. Ideally, data validation establishes the data quality in terms of project data quality objectives. Data validation consists of data editing, screening, checking, auditing, certification, review and interpretation. The purpose of data validation is to define and document analytical data quality and determine if the data quality is sufficient for the intended use(s) of the data. In accordance with DEC requirements, all project data must be of known and acceptable quality. Data validation is performed to establish the data quality for all data which are to be considered when making project decisions. Laboratories will be required to submit results which are supported by sufficient back-up data and QA/QC results to enable the reviewer to conclusively determine the quality of the data.

Qualifications of a Data Validator

In order to ensure an acceptable level of performance, the following qualifications and requirements are established for all consultants/contractors functioning as data validators. These qualifications and requirements shall apply whether the consultant/contractor is: a) retained directly through contracts executed by the State: b) retained as a subcontractor to a consultant functioning under contracts executed by the State; or c) retained by a responsible party functioning under the guidance and direction of an order on consent. Consultant/Contractor functioning as a data validator shall be independent of the laboratory generating the data.

The Consultant/Contractor functioning as a data validator shall provide evidence that all staff members involved in the data validation process have: a) a bachelor's degree in chemistry or natural sciences with a minimum of 20 hours in chemistry; and b) one (1) year experience in the implementation and application of the protocols used in generating the data for which they are responsible. The successful completion of the EPA Data Validation Training course may be substituted for the analytical experience requirement. In addition, these same staff members must have a minimum of one (1) year experience evaluating CLP data packages for contract protocol compliance.

Specific Tasks to be Completed by the Data Validator

Evaluated Completeness of Laboratory Data Package

The data validator shall review the data package to determine completeness. A complete data package will consist of the following components:

- All sample chain-of-custody forms;
- The case narrative(s) including all sample analysis summary forms*;

- Quality Assurance/Quality Control summaries including all supporting documentation;
- All relevant calibration data including all supporting documentation;
- Instrument and method performance data;
- Documentation showing the laboratory's ability to attain the contract specified method detection limits for all target analytes in all required matrices;
- All data report forms including examples of the calculations used in determining final concentrations; and
- All raw data used in the identification and quantification of the contract specified target compounds.

*These forms appear as an addendum to the NYSDEC CLP forms package and will be required for all data submissions regardless of the protocol requested.

All deficiencies in the requirement for completeness shall be reported to the consultant immediately. The laboratory shall be contacted by the consultants Quality Assurance Officer and shall be given ten calendar days to produce the documentation necessary to remove the deficiencies.

Compliance of Data Packages with Work Plan

The validator shall review the submitted data package to determine compliance with those portions of the Work Plan that pertain to the generation of laboratory data. Compliance is defined by the following criteria:

- The data package is complete as defined above;
- The data has been generated and reported in a manner consistent with the requirements of the Quality Assurance Program Plan and the laboratory subcontract;
- All protocol required QA/QC criteria have been met;
- All instrument tune and calibration requirements have been met for the time frame during which the analyses were completed;
- All protocol required initial and continuing calibration data is present and documented;
- All data reporting forms are complete for all samples submitted. This will include all requisite flags, all sample dilution/concentration factors and all pre-measurement sample cleanup procedures; and
- All problems encountered during the analytical process have been reported in the case narrative along with any and all actions taken by the laboratory to correct these problems.

The data validation task requires that the validator conduct a detailed comparison of the reported data with raw data submitted as part of the supporting documentation package. It is the responsibility of the validator to determine that the reported data can be completely substantiated by applying protocol defined procedures for the identification and quantification of the individual analytes. To assist the validator in this determination, the following documents are recommended; however, the EPA Functional Guidelines will be used for format only. The specific requirements noted in the project Work Plan are prerequisite, for example holding times or special analytical project needs, to those noted in the Functional Guidelines.

- The particular protocol(s) under which the data was generated (e.g., NYSDEC Contract Laboratory Protocol; EPA SW-846; EPA Series 500 Protocols).
- Data validation guidance documents such as;
  - "Functional Guidelines for Evaluation of Inorganic Data" (published by EPA Region 2);
  - "Functional Guidelines for Evaluation of Organic Analyses", Technical Directive Document No. HQ-8410-01 (published by EPA); and
  - "Functional Guidelines for Evaluating Pesticides/PCB's Analyses" Technical Directive Document No. HQ-8410-01 (published by EPA).

NOTE: These documents undergo periodic revision. It is assumed that the selected data validator will have access to the most current applicable documents and guidelines.

Reporting

The validator shall submit a final report covering the results of the data review process. This report shall be submitted to the Project Manager or his designee and shall include the following:

- A general assessment of the data package as determined by the degree to which the package is complete and complies with the protocols set forth in the Work Plan;
- A detailed description of any and all deviations from the required protocols. These descriptions must include references to the portions of the protocols involved in the alleged deviations;
- Any and all failures in the validator's attempt to reconcile the reported data with the raw data from which it was derived. Specific references must be included. Telephone logs should be included in the validation report.
- Detailed assessment by the validator of the degree to which the data has been compromised by any deviations from protocol, QA/QC breakdowns, lack of analytical control, etc., that occurred during the analytical process'
- The report shall include, as an attachment, a copy of the laboratory's case narrative, including the DEC required sample and analysis summary sheets;

- The report shall include an overall appraisal of the data package; and
- The validation report shall include a chart presented in a spreadsheet format, consisting of site name, sample numbers, data submitted to laboratory, year of CLP or analytical protocol used, matrix, fractions analyzed (e.g., volatiles, semi-volatiles, Pest/PCB, metals, CN). Space should be provided for a reference to the NYSDEC CLP when non-compliancy is involved and a column for an explanation of such violation.

Attachment B

Chain of Custody Form

CHAIN OF CUSTODY RECORD

Client:	Client Project/Project Name:					No. of Containers	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	Special Turn around Time_____
Client Contact:	Telephone Number (Area Code)/Fax Number:																
Site Location (city/state):																	
Sample Location:	Date	Time	Matrix	Grab. or Comp	Internal use Only												Remarks

parameter and method	sample bottle:	type	size	pres.
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

Sampled by: (Please Print)		Company:	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)

Note: The numbered columns above cross-reference with the numbered columns in the upper right-hand corner.

Appendix G

Site Management Forms

SITE MANAGEMENT PLAN
ANNUAL SITE-WIDE INSPECTION

Site Name: _____ **Date:** _____
Site No.: _____ **Inspected By:** _____
Site Address: _____ **Inspector's Signature:** _____
Owner: _____ **Inspector's Address:** _____
Owner Address: _____ _____

Site Management Plan (SMP) Compliance	YES	NO	N/A	COMMENTS
Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?				
Has the Environmental Easement been upheld?				
Have site-use restrictions been upheld (restricted-residential)?				
Has the groundwater use restriction been upheld?				
Has all intrusive work been conducted in accordance with the SMP?				
Was the Excavation Work Plan followed?				
Was the Community Air Monitoring Plan followed?				
Are all records related to the site maintained and up-to-date?				
Has the soil cap been maintained?				
Document the general site conditions, including any evidence of soil erosion, ponding, and settlement in the soil soil cover, at the time of the site inspection:				

Appendix H

Field Sampling Plan

Former ALCO Site
Parcels A, B, and C
NYSDEC Site Numbers:
C447042, C447043, and C447044

City of Schenectady, New York

Sampling and Analysis Plan

July 2016

Barton & Loguidice

Former ALCO Site
Parcels A, B, and C
NYSDEC Site Numbers: C447042, C447043, and C447044

Schenectady County
City of Schenectady, NY

Sampling and Analysis Plan

July 2016

Prepared For:

Maxon ALCO Holdings, LLC
695 Rotterdam Industrial Park
Schenectady, NY 12306

Prepared by:

Barton & Loguidice, Inc.
10 Airline Drive, Suite 200
Albany, New York 12205

Table of Contents

1.0 Introduction

This document presents the Sampling and Analysis Plan (SAP) for use as field sampling is performed as part of the Site Management Plan (SMP). The SAP contains four sections including this Introduction (Section 1.0). Section 2.0 outlines the sampling objectives of the Site Investigation; Section 3.0 provides a description of the sampling program, including sample designation, sample handling, and analytical requirements. Finally, Section 4.0 details the sampling procedures.

2.0 Sampling Objectives

2.1 Chemical Characterization

Chemicals of concern include volatile organic compounds. Previous subsurface investigation included the installation of soil borings, soil vapor probes, and groundwater monitoring wells to determine the nature and extent of contamination.

2.2 Data Quality Objectives

Data quality objectives (DQOs) are based on the concept that different data uses may require different levels of data quality. Data quality can be defined as the degree of uncertainty in the data with respect to precision, accuracy, and completeness. The five levels of data quality are:

- Screening (Level 1) - This provides the lowest level of data quality, but with the most rapid turnaround on results. It is often used for monitoring of health and safety conditions, preliminary comparison to Applicable or Relevant and Appropriate Requirements (ARARs), initial site characterization and location of areas designated for higher levels of sampling and analyses, and for screening of bench-scale remediation tests. These data are typically generated on-site using real-time measuring devices and include total organic vapor concentrations from PID readings, Draeger tube measurements, pH, specific conductance, dissolved oxygen, airborne particulates and any other data obtained using direct-reading instruments.
- Field Analyses (Level 2) - This level provides rapid results in the field and is generally of better quality than Level 1 data. Analyses include mobile lab generated data and computer generated modeling of site data (i.e., geophysical data, hydraulic conductivity data).
- Engineering (Level 3) - These methods provide an intermediate level of data quality and are used for site characterization. Engineering analyses may include higher levels of mobile lab generated data or laboratory generated data using rapid turnaround methods. These types of methods provide useful site characterization data, but are generally considered for screening purposes since the results are generated without the benefit of full quality control documentation.
- Confirmational (Level 4) - This provides the highest level of data quality and is appropriate for use in risk assessments, engineering design and for cost evaluations. This level requires the analytical laboratory to be NYSDOH ELAP certified for ASP/CLP categories and to provide internal quality control

documentation derived from such reporting protocols. Projects requiring the full ASP/CLP laboratory reporting will also be subject to independent third-party data validation or an internal Data Usability Summary Report (DUSR).

- Non-Standard (Level 5) - This refers to analyses by non-standard protocols; for example, when exacting detection limits or analysis of an unusual chemical compound is required. These analyses often require method development or adaptation. The level of data quality is usually similar to that of Level 4.

A NYSDOH ELAP certified laboratory will generate Level 4 data, as previously described, for all the samples collected following startup of the remedial systems. Level 1 and 2 data can be generated in the field by a qualified environmental professional to document health and safety monitoring, field characterization of sampling media, demonstration of the adequacy of monitoring well development efforts, and to provide rationale for construction of groundwater monitoring wells and termination of contaminated soil excavation activities.

3.0 Sampling Program

3.1 General Sampling Program

All sample handling, record keeping, calibration, and other quality assurance/quality control matters will be handled in accordance with Appendix F of the Site Management Plan.

3.2 Sample Designation

Samples will be designated using an alphanumeric code to identify the location and media sampled. Sampling media will be identified by a two or three-letter code, for example: DPE (dual phase extraction), MW (monitoring well), etc. A two-digit number, beginning with 01 and increasing sequentially will also identify each sample location.

3.3 Sample Handling

3.3.1 Sample Container Requirements and Holding Times

Specific sample containers are required for each of the media types to be sampled, as well as the proposed analyses to be performed. Samples should be received by the laboratory within 48 hours of sample collection. In addition, there are specific holding time requirements for the type of analyses requested for each sample. These requirements are described below:

Soils:

EPA Method 8260 analysis requires samples to be collected in a 4 oz. glass container with a teflon-lined cap. The container must be completely filled with material to create a "zero head space" condition. The holding time is limited to 7 days. These samples do not require preservation.

Groundwater

EPA Method 8260 analysis requires samples to be collected in two 40-ml., glass vials with a teflon-lined septum cap. The container must be completely filled with water to create a "zero head space" condition. The holding time is limited to 7 days for analysis.

Soil Vapors

EPA Method TO-15 analysis requires air samples to be collected in stainless steel SUMMA canisters with a minimum 400-cubic centimeter capacity. An EPA Method TO-15 detection limit of 1 part-per-billion (volume of air) will be required for the

laboratory analysis. The holding time is limited to 14 days and there are no preservation requirements for this analysis.

Sample Collection Container Summary Chart				
Matrix	**Bottle**	**Preservative**	**Analytical Method [1]**	**Holding Time [2]**
Soil[3]	4 oz. Glass w/teflon-lined cap	< 4ºC	8260	10 days
Ground Water/ Aqueous[3]	2-40 ml. Glass Vials with teflon-lined septum	< 4ºC, HCl	8260	10 days
Soil Vapor	Summa Canister (400-cc minimum)	None	TO-15	14 days
1 - USEPA SW-846 Methods 2 - All holding times from Validated Time of Sample Receipt (VTSR) 3 – Soil and water samples requiring off-site disposal may also be subject to TCLP analysis				

3.3.2 Sample Packaging and Shipping

Samples will be packaged and shipped with consideration to preservative requirements and hold times. Samples will be delivered to the laboratory within 48 hours of sample collection.

3.3.3 Quality Assurance/Quality Control Samples

The proposed analytical program includes the collection and analysis of QA/QC samples. A trip blank will accompany each daily sample group delivered to the laboratory. The trip blank will consist of a pair of laboratory-prepared vials for VOC (i.e., EPA 8260) analysis only.

4.0 Field Sampling Procedures

4.1 Groundwater Sampling

4.1.1 Monitoring Well Sampling Procedure

The primary objective of field personnel in obtaining groundwater samples is to collect and preserve representative samples, and adhere to proper chain-of-custody procedures in their prompt shipment to the certified laboratory for analysis within the specified holding times. Upgradient monitoring wells will be sampled before downgradient wells in the following manner:

1. Monitoring wells will be purged prior to sampling using disposable bailers or properly decontaminated pumping equipment. A minimum of three well volumes will be purged where possible. For wells that bail dry, purging will consist of complete evacuation.
2. Following adequate recovery (within 80% of static levels), obtain sample with a disposable bailer suspended on new, solid-braid nylon rope. Transfer sample directly from the bailer to the parameter-specific sample container labeled appropriately (sample ID Number and preservative), and place in coolers with ice or ice packs. Fill sample bottles in the following order: VOCs then any remaining parameters (if any).
3. Calibrate all field chemistry equipment every day.
4. Follow record keeping and chain-of-custody procedures as detailed in Appendix F of the SMP.
5. Replace all well caps, and lock protective well cover.
6. At the end of the sampling day, the coolers will be taped shut with the custodian's initials placed on the tape at the points of entry. Samples will be delivered to the laboratory by field personnel upon departure from the site. Alternatively, an express carrier may be used to deliver the samples to the laboratory.

4.2 Water Level Monitoring

In order to determine the horizontal hydraulic gradient(s) exhibited by the surface of the water table and potential routes of contaminant migration, water level measurements will be made using the following procedures:

1. After noting the general conditions of the well (surface seal, lock, etc.) the bottom of the well will be sounded by lowering a decontaminated, weighted probe into the well.
2. Well bottom conditions will be noted (silty, blockages, etc.). The distance from the base of the screen to the top of the casing will be recorded to the nearest 1/100th of a foot.
3. The static water level will be measured and noted by sounding with an electronic tape or "popper" to the nearest 1/100th of a foot.
4. The water level readings will always be taken from a marked point on the well casing.
5. Other measurements to be taken are:
   - Stickup of well casing from ground surface or surface seal.
   - Depth to bottom of well from the top of the riser.
6. The date and time will be recorded for these measurements. Also, any pertinent weather conditions will be noted (i.e., significant recent precipitation or drought conditions).
7. Upon completion, the wells will be secured, and all downhole equipment will be decontaminated with methanol and deionized water.
8. As practicable, all water levels should be collected on the same day.

4.3 Surface Water Sampling Procedure

The primary objective of field personnel in obtaining surface water samples is to collect and preserve representative samples, and adhere to proper chain-of-custody procedures in their prompt shipment to the certified laboratory for analysis within the specified holding times. Surface water will be sampled prior to sediment sampling. Upgradient surface water will be sampled before downgradient surface water in the following manner:

1. Obtain sample with a dedicated disposable bailer suspended on new, solid-braid nylon rope. As the bailer is lowered through the water column, water is continually displaced through the bailer until the desired depth is reached, at which point the bailer is retrieved. This technique may not be successful where

strong currents are found.

2. Transfer sample directly from the bailer to the parameter-specific sample container labeled appropriately (sample ID Number and preservative), and place in coolers with ice or ice packs. Fill sample bottles in the following order: VOCs then any remaining parameters (if any).
3. Calibrate all field chemistry equipment every day.
4. Follow record keeping and chain-of-custody procedures as detailed in Appendix F of the SMP.
5. At the end of the sampling day, the coolers will be taped shut with the custodian's initials placed on the tape at the points of entry. Samples will be delivered to the laboratory by field personnel upon departure from the site. Alternatively, an express carrier may be used to deliver the samples to the laboratory.

4.4 Sediment Sampling Procedure

The following procedures will be performed during the collection of a disturbed, shallow sediment sample from beneath a water column:

1. Sediment samples collected from beneath an aqueous layer will be obtained using equipment that is properly decontaminated between sampling locations or equipment will be dedicated to each sampling location and appropriately discarded following sample collection.
2. Remove the sediment from the pre-identified sampling location and transfer the sample into a dedicated sampling container consisting of an 8-oz, wide mouth glass jar with a Teflon lined lid.
3. Remove all excess water from the sample and seal lid of the container.
4. Chemical preservation will not be required as long as the sediment sample is cooled to a maximum temperature of 4°C and is shipped to a certified laboratory within the appropriate holding time.
5. If multiple grabs of a sediment sample is necessary to collect sufficient quantities for analysis, sediment should be homogenized, unless sampling for VOCs, where the sample will be collected and placed directly into the sampling container.
6. If compositing of sample is required, equal portions of sediment will be placed into a stainless steel bowl and mixed thoroughly to create a homogenized sediment sample.
7. Sample container will be appropriately prepared, handled, and documented in accordance with the procedures outlined in Appendix F of the SMP.

8. Following sediment sample collection, locate the sampling location using a hand held Global Positioning System (GPS) for appropriate documentation and mapping.

All pertinent sediment sampling information (i.e., sampling equipment used, date of sample collection, time of sample collection, etc.) shall be recorded by the B&L Supervising Engineer/Geologist in a bound field log book.

Appendix I

Responsibilities of Owner and Remedial Party

Responsibilities

This page may be used when site management responsibilities are to be carried out by multiple parties. For example, it can be used when a Remedial Party does not own the site property, and, therefore, must share site management and/or reporting obligations with a site owner, or when the State is operating a remedial system or otherwise carrying out site management.

The responsibilities for implementing the Site Management Plan ("SMP") for the ALCO-Maxon Site – Parcel A site (the "site"), number C447042, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:

Maxon ALCO Holdings, LLC, Attn: David Buicko, 695 Rotterdam Industrial Park, Schenectady, NY 12306, dbuicko@galesi.com, (518) 356-4445 (the "owner").

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

Maxon ALCO Holdings, LLC, Attn: David Buicko, 695 Rotterdam Industrial Park, Schenectady, NY 12306, dbuicko@galesi.com, (518) 356-4445

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.

2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

3) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3 Notifications.

6) In the event some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3 Notifications and (ii) coordinate the performance of necessary corrective actions with the RP.

7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR Part 375 contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 2.4 of the SMP. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

8) The owner will: conduct inspections, perform sampling and monitoring on behalf of the RP. The RP remains ultimately responsible for maintaining the engineering controls.

9) In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

Remedial Party Responsibilities

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.

2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.

3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .

6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3 Notifications of the SMP.

7) The RP is responsible for the proper maintenance of any installed vapor intrusion mitigation systems associated with the site, if required.

8) The RP is responsible for the proper monitoring and maintenance of any installed drinking water treatment system associated with the site, if required.

9) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.

10) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the Department to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

Appendix J

Parcel A
Spill 1604483 Remedial Work Plan

Former ALCO-Maxon Site – Parcel A
Brownfield Cleanup Project

City of Schenectady
Schenectady County, New York

Parcel A
Spill 1604483
Remedial Work Plan
(RWP)

New York State
Brownfield Cleanup Program
Site No. C447042

August 2016

Barton & Loguidice

Former ALCO-Maxon Site – Parcel A
Brownfield Cleanup Project
City of Schenectady

Spill 1604483 Remedial Work Plan
Site No. C447042

August 2016

Prepared For:

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

Prepared By:

Barton & Loguidice, Inc.
10 Airline Drive, Suite 200
Albany, New York 12205

I, the undersigned engineer, certify that I am currently a NYS registered professional engineer and that this Remedial 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.

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Appendices

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. In November of 2013, MAH proposed the reconfiguration of Parcels B and C to NYSDEC to more efficiently proceed with potential Interim Remedial Measures and redevelopment planning; the proposed reconfiguration was approved by NYSDEC by letter dated December 23, 2013.

The purpose of the BCP is to encourage voluntary remediation of brownfield sites for reuse and development. This Spill 1604483 Work Plan is preceded by Remedial Investigation (RI) and Supplemental Remedial Investigation (SRI) Reports, which characterized impacts at the site resulting from historical industrial usage, a Remedial Work Plan (RWP) and Alternatives Analysis Report (AAR), which evaluated and recommended remedial alternatives for the site, and an Excavation Work Plan (EXC-WP) which provided the procedures to be followed when remedial and/or development activities require excavation into the existing site soils (prior to placement of cover soils). These reports have been reviewed and approved by NYSDEC in accordance with the BCA and the applicable portions of 6 NYCRR Part 375.

Ongoing site activities include excavation and re-armoring of the riverbank. During excavation on Parcel A, in the vicinity of former MW-04 and Spill 1604483, B&L personnel observed a sheen seeping from riprap along the bank of the Mohawk River adjacent to the Casino in Parcel A. Material from the vicinity of Spill 1604483 had been previously excavated and screened with a photoionization detector (PID). Based on field observations and field screening, PID readings <30 ppm, further material was not removed from the excavation. On July 11, 2016, oil-containment and absorbent booms were placed on the Mohawk River adjacent to the petroleum seeps and continually monitored.

While the placement of oil-containment booms has been effective, the persistence of the sheen indicates that a potential source from historic material may remain in the vicinity of former MW-04 and adjacent onshore area to Spill 1604483. Discussions with NYSDEC led to the opinion that further investigation of the onshore area adjacent to the seep was warranted. An investigation to characterize the extent of contamination associated with Spill 1604483 was conducted; this Remedial Work Plan presents a methodology for remediating the contaminated soils/sediments identified by the investigation.

1.1 Purpose of Report

The purpose of this work plan is to present the methodology for remediating the contaminated soils/sediments associated with Spill 1604483.

1.1.1 Report Organization

This report is organized into three sections (including this introduction section), with appropriate subsections within each division. Figures are located following the text, prior to the appendix in the back of the document.

2.0 Prior Remedial Activities

This section discusses the prior remedial activities for the spill area to be addressed. The area is shown on Figure 1.

2.1 Parcel A – Spill 1604483

The following is a summary of each environmental investigation conducted at the former ALCO Industrial property in the vicinity of Spill 1604483 from 1992 through 2009, in chronological order. Prior subsurface investigations at the site identified a zone of subsurface soils impacted by historical operations.

A review of the historical data suggests that former monitoring well MW-04, onshore adjacent to Spill 1604483, contained levels of one or more petroleum-related VOCs (benzene, ethylbenzene, toluene, xylenes, etc.) at concentrations above TOGS 1.1.1 standards when they were sampled on one or more occasions between 1992 and 1999. In addition, monitoring well MW-04 has historically contained free product.

However, MW-04, when sampled during the RI, did not contain any product or any petroleum-related VOCs above TOGS 1.1.1 standards. These results suggest that remedial efforts and/or natural attenuation have effectively eliminated VOCs impacts in the vicinity of the well. Furthermore, the presence of VOC TICs consisting primarily of petroleum-related compounds suggest that degradation/breakdown of petroleum has occurred in groundwater across the Site. These results indicate that free product recovery efforts have effectively reduced the contamination in the vicinity of MW-04.

Interim Investigation, July through August 1992 – Interim Report Tasks 1 Through 4 Drainage System Assessment, Nott Street Industrial Park (Dames & Moore, 1993)

During April 1992, Coyne Textile Services (CTS), with operations on Front Street, adjacent to the ALCO-Maxon Site, had a major fuel oil release that partially escaped into the municipal storm drain sewer system which flows under the Site, discharging to the Mohawk River at the College Creek Outfall. During inspection of this release, the New York State Department of Conservation (NYSDEC) reportedly observed petroleum discharges seeping from riprap along the bank of the Mohawk River adjacent to Buildings 320 and 324 in Parcel A. The NYSDEC requested that a subsurface investigation be performed onshore adjacent to the petroleum seep areas. SIC entered into an Order on Consent (OC) (Index No. R4-1338-92-05).

During July and August 1992, Dames & Moore performed an interim investigation on behalf of SIC. This investigation included evaluating the sewer system; visual site inspection and records review to evaluate potential on-site petroleum sources; and, collecting and analyzing three

Mohawk River surface water samples from locations adjacent to and downstream of the reported soil seep areas.

From this investigation, Dames & Moore recommended maintaining contaminant booms in the vicinity of the College Creek outfall; removing oil from surcharged manholes and catch basins; monitor sewer system for on- and off-site discharges of oil; and, exploring the feasibility of separating the Park from the City of Schenectady's storm sewer system. In addition, Dames & Moore found several on-site structures that could be potential petroleum sources. Finally, results of the Mohawk River water samples indicated that volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and Priority Pollutant Metals (PP Metals) were not detected above the laboratory reporting limits.

Follow-up Investigation, July through September 1992 – Summary of Activities Related to Selected Issues Noted in NYSDEC Order on Consent, File No. R4-1338-92-05 (Dames & Moore, 1993)

To address various other issues, Dames & Moore performed several additional investigation activities from July through September 1992. The additional activities discussed in the report included analytical results of free-product samples collected from monitoring wells MW-01 and MW-04; analytical results from water samples collected from the storm sewer system near monitoring well MW-01; analytical results from additional water samples collected from the Mohawk River; free-product recovery from monitoring wells MW-01 and MW-04; identification and removal of PCB-containing transformers; and deployment of oil containment absorbent booms.

The results of this investigation indicated that the free-phase product in MW-01 and MW-04 was either highly weathered diesel oil or No. 2 fuel oil and resulted from historical operations in Building 324 or from former ASTs or USTs that were removed. These samples also contained other contaminants of concern (COCs) such as PCBs, VOCs, and metals. One storm sewer sample contained PCBs and an absorbent boom was placed in the manhole. Two water samples collected from the Mohawk River near MW-01 and MW-04 did not contain petroleum ID, PCBs, VOCs, SVOCs or PP Metals. Six downstream water samples collected from the Mohawk River did not contain PCBs.

Free-phase petroleum was hand bailed from wells MW-01 and MW-04 from October 1992 through December 1992 and January 1993, respectively. In January 1993, free-phase product skimming systems were installed and became operational in these wells.

Oil-containment and absorbent booms were placed on the Mohawk River adjacent to the petroleum seeps in November 1992. In addition, three transformers adjacent to Building 328 were removed and disposed of in February 1993.

Delineation Boring Program, October through November 1992 – Summary of Activities Related to Delineation Boring Program (Dames & Moore, 1993)

Dames & Moore performed a soil-boring program in October and November 1992. The scope of this work included the drilling and sampling of 29 soil borings. Four of these borings were converted to 6-inch diameter groundwater/product recovery wells (RW-01 through RW-04). These wells were installed in the immediate vicinity of areas where free-phase petroleum was detected. A step drawdown test and a pump test were performed on well RW-02. The pump test results indicated that a recovery system could be operated with one recovery well in each of the two identified areas of free-phase petroleum.

In addition to the four borings converted to recovery wells, 10 of the remaining 25 borings were converted to piezometers (P-1 through P-10). Following installation, free-phase petroleum was observed in three of the recovery wells (RW-01, RW-02, and RW-03) and in two of the piezometers (P-1 and P-3) adjacent to monitoring well MW-04. Soil sample results suggested that relatively elevated total petroleum hydrocarbons (TPH) concentrations were limited to an area along the edge of the river in the vicinity of monitoring well MW-04.

Surface, Subsurface & Groundwater Investigation, March through May 1994 – Summary of Investigations (Dames & Moore, 1994)

Additional investigation activities were performed between March 28 and May 5, 1994. The investigation was performed in three areas (Area 1 defined as the area near monitoring well MW-01 between Buildings 324 and 326/328 in Parcel A; Area 2 defined as the area near monitoring well MW-04 to the west of Building 322 and north of Building 320 in Parcels A and B; and Area 3 defined as the area near the former hazardous waste UST adjacent to the north side of Building 332 (which is within Parcel B) and consisted of the collection of eight surficial soil samples, installation of five shallow groundwater monitoring wells, installation of two intermediate-depth groundwater monitoring wells, and collection and analysis of groundwater samples from 12 monitoring wells.

The Summary Report concluded that based on the results of the investigation, it appeared that the extent of historic residual free-phase petroleum in the groundwater was limited to two small areas at the Park. One of these areas was at monitoring well MW-01 and the second area was at monitoring well MW-04. Further, the report concluded that the only area where PCBs had been detected was in the vicinity of monitoring well MW-01. Low levels of dissolved hydrocarbons had been detected at three areas at the Park: the vicinity of monitoring well MW-01, the vicinity of monitoring well MW-04, and an area west of Building 332 (monitoring well MW-12), where a UST was formerly located. In addition, Dames & Moore recommended continuing the operation of the temporary free-product skimming systems in monitoring wells MW-01 and MW-04.

Free Product Petroleum Recovery From Monitoring Wells MW-01 & MW-04, 1992-1994 – Summary of Activities Related to Selected Issues Noted in NYSDEC Order on Consent, File No. R4-1338-92-05 (Dames & Moore, 1993)

Hand bailing was initiated during October 1992 in response to the presence of free product in monitoring wells MW-01 and MW-04 and continued until December 1992 and January 1993, respectively. Temporary free-product skimming systems were installed in monitoring wells MW-01 and MW-04 in December 1992 and January 1993, respectively. The recovery systems were operated for approximately two years, when the systems were permanently shut down as a result of negligible product recovery. During this time period, approximately 550 gallons and 385 gallons of an oil/water mixture was collected and properly disposed of from monitoring wells MW-01 and MW-04, respectively. The oil collected from monitoring well MW-01 was sampled again for PCBs on September 14, 1994, and results indicated PCBs were detectable in the oil at a concentration of 0.003 ppm.

Deployment of Oil Containment & Absorbent Booms in the Mohawk River, 1992-2002 – Summary of Activities Related to Selected Issues Noted in NYSDEC Order on Consent, File No. R4-1338-92-05 (Dames & Moore, 1993)

The prior owner first deployed oil containment and absorbent booms during November 1992 and, on occasion, until 2001, adjacent to the locations where sheens were intermittently reported. Booms were deployed in the spring and retrieved in early winter before the Mohawk River iced over. This included the areas upstream and downstream of College Creek, where sheens associated with off-site sources had been observed in the past.

Monitoring Well MW-04 Pilot Bioventing System, December 1996 – Schenectady Industrial Corp., Nott Street Industrial Park, Draft Follow-up Subsurface Investigation Report, Bioventing System Subsurface Soil Assessment (Letter Report) (VHB, September 2001)

To further address the presence of subsurface petroleum near monitoring well MW-04, the prior owner installed a pilot bioventing system during December 1996. Additionally, an absorbent bailer has been installed in monitoring well MW-04, which was inspected biweekly and replaced as necessary. The bioventing system consists of a self-contained blower assembly connected to wells RW-03 and BVM-2, which is utilized to aerate subsurface soils immediately above the water table. The system operated continuously from December 1996 to May 2001, with the exception of brief outages for routine maintenance.

To assess the effectiveness of the bioventing system, HLA performed a Geoprobe subsurface investigation on December 8, 1998. The results of this investigation were reported in an April 14, 1999 letter from HLA to the NYSDEC. The investigation involved the advancement of 11 Geoprobe borings radially located around both bioventing injection points. A minimum of two

soil samples from each boring at the 10- to 12-foot and 12- to 14-foot depth intervals (the saturated/unsaturated interface) were collected and analyzed for TPH. TPH was detected in the 10- to 12-foot interval at concentrations as high as 1,100 ppm and in the 12- to 14-foot interval at concentrations as high as 24,000 ppm. Based on the results, it was concluded that the bioventing system was successfully treating the subsurface oil-stained soils, although with diminishing effectiveness farther away from the injection points.

HLA recommended that the bioventing system continue to operate, and that a follow-up Geoprobe assessment be performed during 2000 to monitor the effectiveness of the system. It was also recommended Oxygen Release Compound (ORC®) "socks" be deployed in several wells in the vicinity of monitoring well MW-04 to assess the effectiveness of this proprietary product in enhancing the natural bioremediation of petroleum contaminated groundwater associated with this portion of the property.

Late in 2001, VHB, in a letter to Alan Geisendorfer of Region IV NYSDEC, recommended that the Bioventing and ORC efforts cease as the remaining materials were residual petroleum hydrocarbons recalcitrant to further treatment in the foregoing fashion. NYSDEC subsequently approved the cessation of treatment.

Spill 1604483 Investigation, August 2016 – Barton & Loguidice, Inc.

B&L, Inc. conducted a subsurface investigation in August 2016 per a NYSDEC approved work plan in the area of Spill #1604483. Seven borings were advanced on the lower bank (elevation 217 ft. above sea level (ASL)) and four borings were advanced on the upper bank (elevation 230.5 ASL), as shown on Figure 2. Borings were advanced until soil/sediment samples encountered were visibly clean and PID readings were below 15.0 PPM. Soil/sediment samples were collected at selected intervals and submitted for laboratory analysis by USEPA Method 8260B. PID readings and sample collection intervals are shown on Figure 3. The inferred extent of impacted soil/sediment is shown on Figure 4.

Residual VOCs were detected in eleven of the twelve soil samples collected from the ten soil borings advanced on August 11, 2016, but at concentrations below their respective Restricted Residential Soil Cleanup Objective (SCO). DROs were also detected nine of the twelve soil samples, but there is no corresponding SCO. BPB-11 was advanced on August 12, 2016 to ensure the upper limits of impacted soils had been defined; based on field observations and limited PID readings, no sample was collected. The laboratory results for the soil samples are provided in Appendix C.

ALCO- Spill 1604483 Source Area Investigation	
Diesel Range Organics C10-C28	
BPB-01 (4.25-5')	280 mg/Kg
BPB-01 (12-13')	-
BPB-02 (4-5')	420 mg/Kg
BPB-03 (4.75-5')	710 D mg/Kg
BPB-03 (16-17')	9500 D mg/Kg
BPB-04 (5-6')	420 mg/Kg
BPB-05 (5-6')	1500 D mg/Kg
BPB-06 (6')	16000 D mg/Kg
BPB-07 (4.5-5')	6400 D mg/Kg
BPB-08 (21-22')	-
BPB-09 (21-22')	-
BPB-10 (18-19')	780 D mg/Kg
C10-C28 quantified with Diesel Fuel #2. D = Results for Dilution -Analyte Not Detected at concentration greater than the PQL, RL, or MDL, as applicable.	

3.0 Scope of Work

This work plan (WP) has been prepared following discussions with NYSDEC regarding the need to remediate soil/sediments in the vicinity of Spill 1604483. A Health & Safety Plan (HASP) for Barton & Loguidice, Inc., personnel is provided in Appendix A of this WP. The HASP was developed in accordance with 29 CFR 1910.120. Other companies (contractors) who will be working on this WP can adopt the B&L HASP or provide their own HASP; in either case, safety for personnel of companies other than B&L is the responsibility of that company, pursuant to OSHA regulations.

3.1 Parcel A – Spill 1604483

While the placement of oil-containment booms has been effective, the persistence of the residual sheen indicates that a potential source material may remain in the vicinity of former MW-04 and adjacent onshore area to Spill 1604483. Discussions with NYSDEC have led to the opinion that further investigation of the onshore area adjacent to the seep is warranted.

3.1.1 Monitoring Well Installation

To further delineate the potential source area for Spill 1604483 and determine an effective means for mitigation, a maximum of three new monitoring wells will be installed based on field observations and screening. The wells will be installed and developed using the same techniques as employed in the SRI. The wells screens will be positioned vertically to bridge the apparent water table and to allow for the detection of free-phase light non-aqueous phase liquids (LNAPL).

Samples will be collected from the newly-installed monitoring wells by hand-bailing. Samples will be submitted to a laboratory for analysis of VOCs by USEPA Method 8260B.

3.1.2 Oxidant Injection

Based on current site operations (building construction, utility installations, site work, etc.) and the location of the observed impacted soils/sediments, in-situ remediation (chemical oxidation) will be employed to degrade the contaminant source area. This process entails the injection of a chemical oxidant solution into the subsurface contaminated zone, where the chemical oxidant breaks the contaminant down into its constituent components. The chemical is injected at different depths and locations to ensure that the contaminated zone is fully saturated with the oxidant. The residual compounds left over after the reactions are conventional groundwater constituents: sulfate, carbonate, carbon dioxide, sodium etc.

The proposed remedial approach employs the same technology for both the saturated and unsaturated zone contamination. The proposed remedial approach entails injecting a liquid chemical oxidant to destroy contaminants in the subsurface in the area of high concentration. PersulfOx™ has been selected for this site, as it has desirable characteristics in terms of viscosity and reaction speed that make it well suited for application in both the saturated and unsaturated zones. Manufacturer's literature on PersulfOx™ is provided in Appendix B.

Based on the contaminant distribution described by existing site data, the zone of observed petroleum impact identified in borings presented on Figure 5 will be targeted for injection of PersulfOx™. A Geoprobe will be used to advance 2-inch diameter rods, through which the PersulfOx™ will be injected into the subsurface. The rods will be advanced to the bottom of the targeted vertical zone and PersulfOx™ injected on one-foot increments as the rods are withdrawn (bottom-up method). An expendable tip will be placed on the lead rod; the tip is disconnected as the rods are withdrawn and PersulfOx™ is injected out the bottom of the lead rod. A grout pump will be used to inject PersulfOx™ through the rods into the targeted zone.

The highest contaminant concentrations have been noted within the treatment area shown on Figure 5. PersulfOx™ will be injected on roughly five foot spacing (approximately 20 injection points on the lower bank and 10 injection points on the upper bank). B&L anticipates injecting PersulfOx™ at a rate of roughly 40 pounds per vertical foot.

The existing sorbent and containment booms will be kept in place during and after the oxidant injection, to contain petroleum that might be released from the impacted soil/sediments during or after the injection event. As an additional safeguard, a geosynthetic clay liner (GCL) mat will be laid along the bank. The GCL is a composite of two layers of permeable synthetic material which sandwich a layer of supported bentonite clay. The GCL is roughly 15 feet in width and will be installed the length of the identified spill area; the GCL will be anchored and ballasted as appropriate to temporarily secure it to the bank, as shown conceptually on Figure 5. Please note that installation of GCL along the river bank is not anticipated to produce a perfect seal given the irregular surface of the rip-rap embankment material used to support the river bank; additional containment is provided by the sorbent and containment booms. The GCL will be left in place for a minimum of two weeks following the injection event.

3.2 Reporting

A monthly Letter Report will be prepared to provide the findings of the work described in this work plan. The Report will contain related supporting figures and tables, such as laboratory data reports and boring logs provided in appendices.

Figure 1

Parcel A SPILL 1604483 Area

PROPOSED LEGEND

- PROPOSED CONTOURS
- PROPOSED MANHOLE
- PROPOSED CATCHBASIN
- PROPOSED CONCRETE WALK
- PROPOSED CURB
- PROPOSED PAVEMENT MARKINGS
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER MAIN & VALVE

LEGEND

- CHLORINATED SOLVENT PLUME INJECTION AREA
- CHLORINATED SOLVENT PLUME (AOC 2)
- PARCEL BOUNDARIES
- STS NOT PART OF PARCEL
- Investigation Area for Spill 1604483

MOHAWK RIVER

DAYLIGHT COLLEGE CREEK

LOOKOUTS

LIMITS OF TEMPORARY SHEET PILE

APPROXIMATE BOOM LOCATION

LIMITS OF TEMPORARY SHEET PILE

MATCH LINE SHEET C6

PARCEL A

PARCEL B

PARCEL C

STORM SEWERS TO BE ABANDONED

EXISTING BUILDING

STS NOT PART OF PARCEL

EXISTING BUILDING

CHLORINATED SOLVENT PLUME (AOC 2)

CHLORINATED SOLVENT PLUME INJECTION AREA

CHLORINATED SOLVENT PLUME (AOC 2)/ INJECTION AREA

NEW PIEZOMETER

MW-62

MW-63

MW-64

MW-67

MW-70S

MW-70D

MW-46

MW-19

COLLEGE CREEK ACCESS

ERIE BOULEVARD

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

COMPLETED CONSTRUCTION

Significant Construction Changes Are Shown

By _____ Date _____

Ck'd _____ Date _____

REVISIONS

MAXON ALCO HOLDINGS, LLC
GALESI GROUP

Parcel A Spill 1604483 Area

SCHENECTADY COUNTY, NEW YORK

CITY OF SCHENECTADY

Barton & Loguidice, D.P.C.

Date
AUGUST 2016

Scale
1"=60'

Sheet Number
1

File Number
1338.008.001

Plotted: Apr 15, 2016 – 11:22AM SYR By: kas
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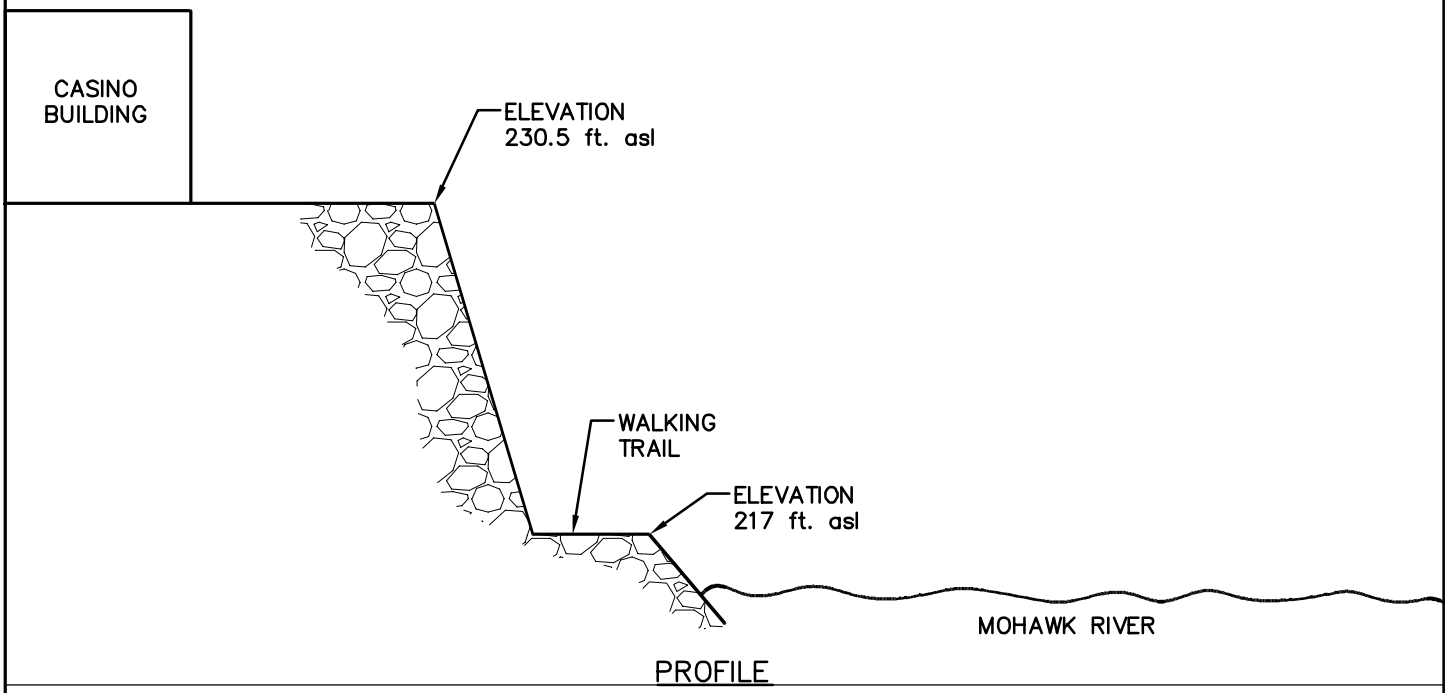
Drawn by ____ JGS2 Designed by ____ NRM In charge of ____ INITIALS

Checked by ____

Figure 2

SPILL 1604483 Investigation



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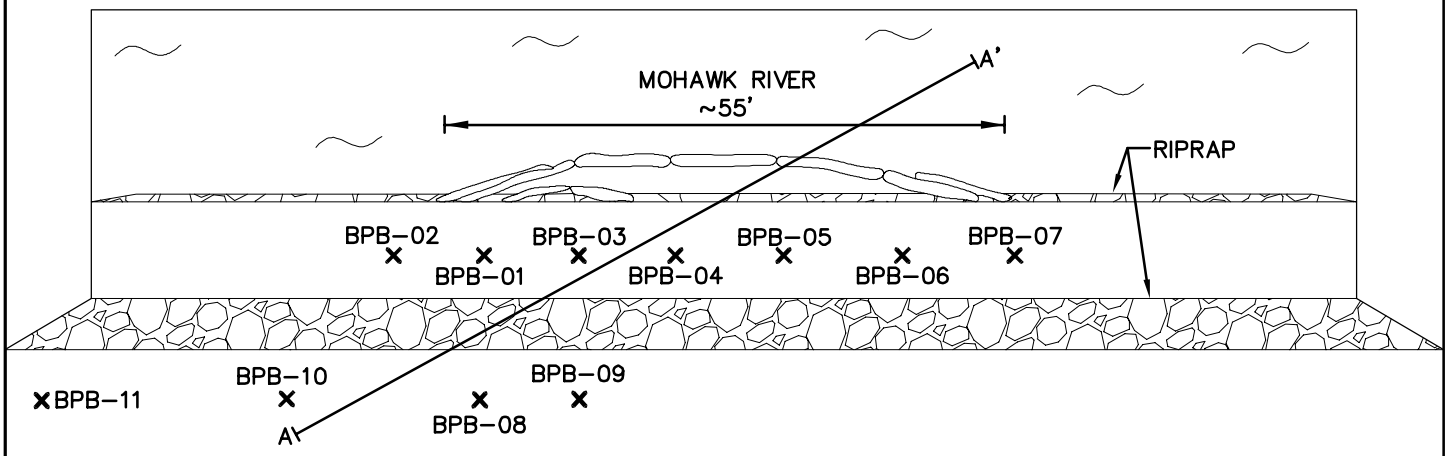

BIRDS EYE VIEW

Barton & Loguidice, D.P.C.

MAXON ALCO HOLDINGS, LLC.
ALCO BROWNFIELD SITE

SPILL 1604483 INVESTIGATION

SCHENECTADY, NY. SCHENECTADY COUNTY, NEW YORK

Date	Scale
AUGUST, 2016	NOT TO SCALE

Figure Number 2

Project Number 1368.001.001

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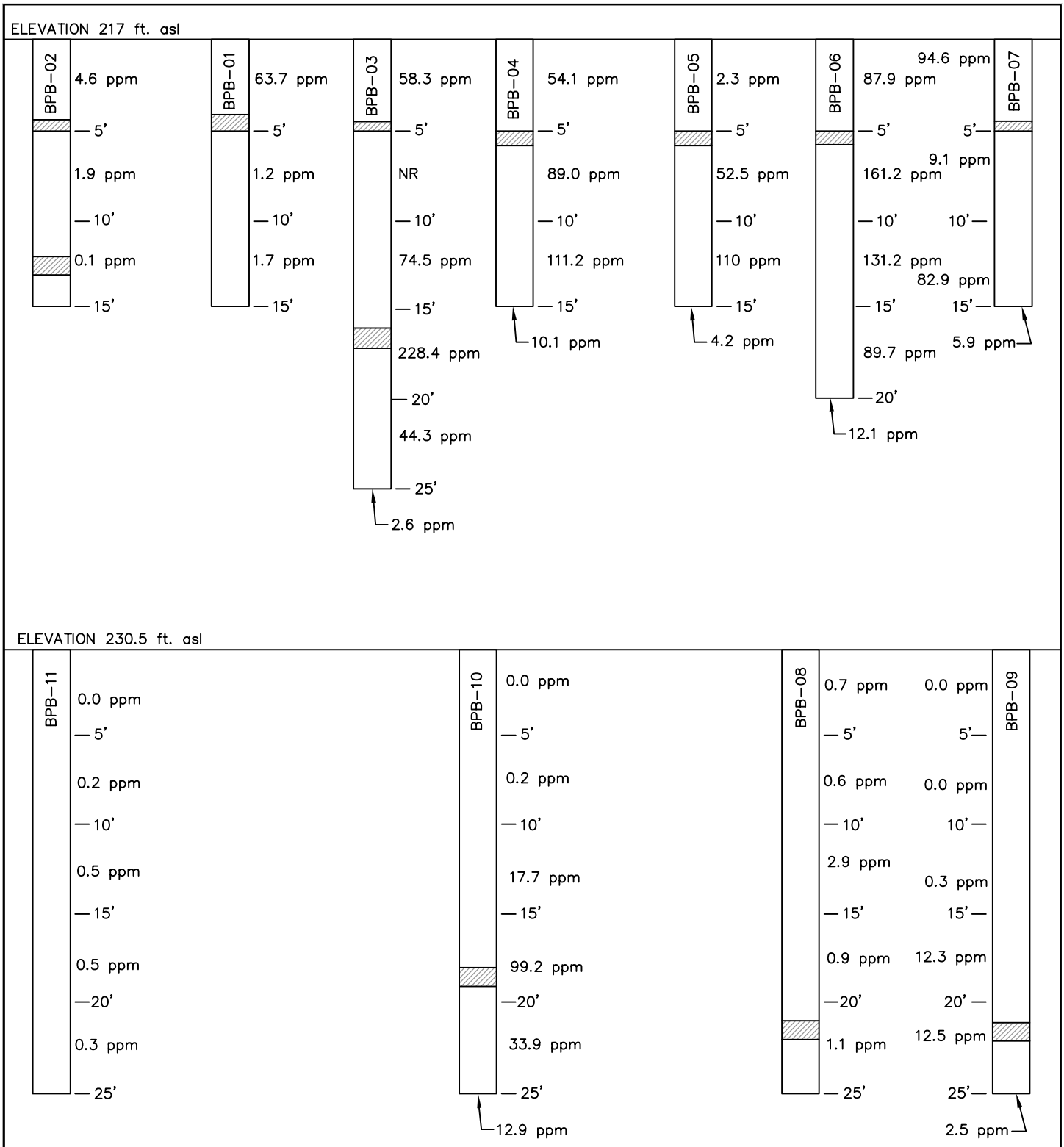
Figure 3

Samples



NOTE:
PID READINGS SHOWN ARE THE PEAK READINGS FOR THE 5 ft. SAMPLING INTERVALS

LEGEND:
SAMPLING

Barton & Loguidice, D.P.C.

MAXON ALCO HOLDINGS, LLC.
ALCO BROWNFIELD SITE

SAMPLES

SCHENECTADY, NY. SCHENECTADY COUNTY, NEW YORK

Date	Scale
AUGUST, 2016	NOT TO SCALE

Figure Number
3

Project Number
1368.001.001

Plotted: Aug 23, 2016 - 9:21AM SYR By: lmw
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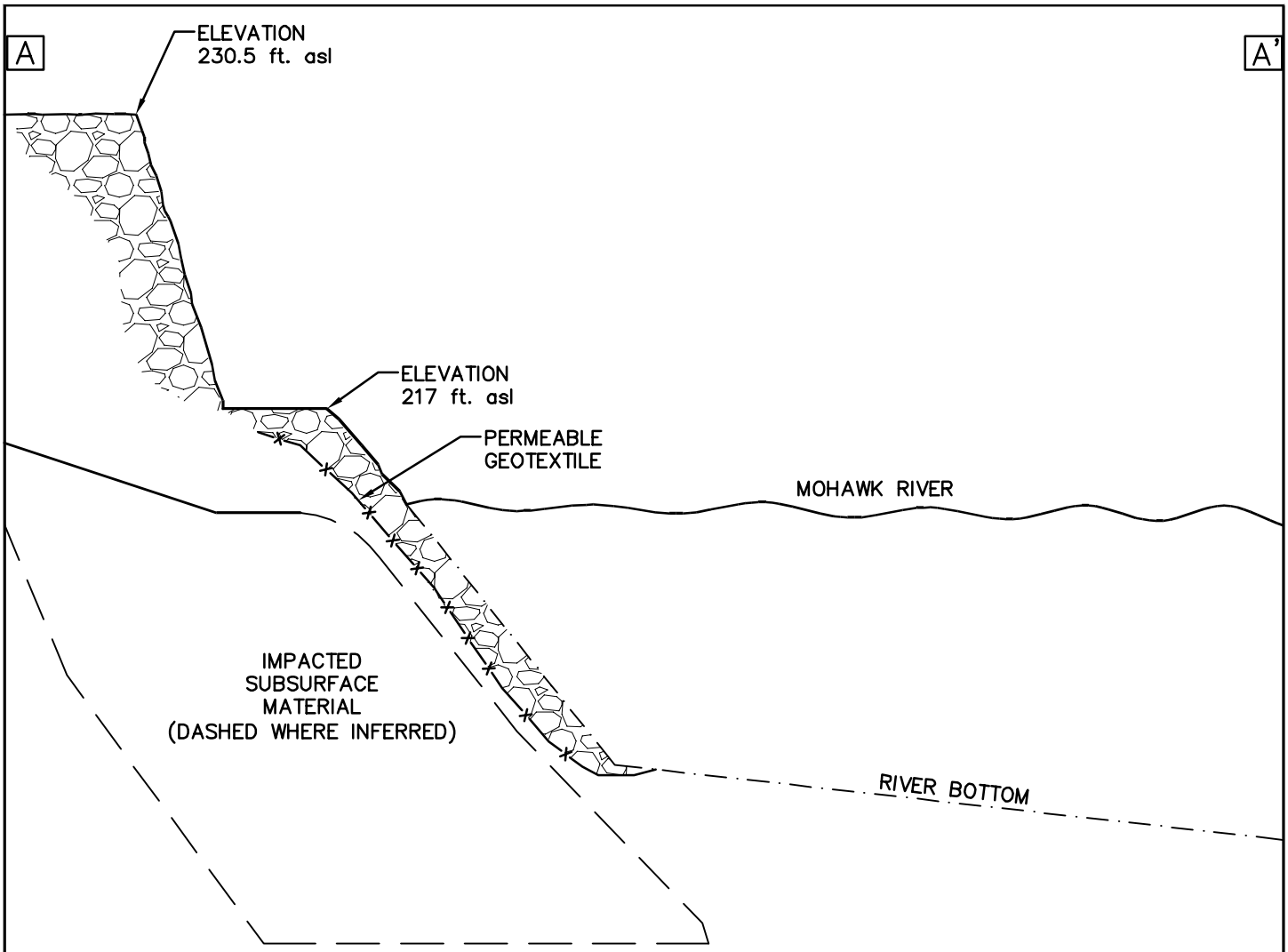
Figure 4

Section A-A’



SECTION A–A'

Barton & Loguidice, D.P.C.

MAXON ALCO HOLDINGS, LLC.
ALCO BROWNFIELD SITE

SECTION A–A'

SCHENECTADY, NY. SCHENECTADY COUNTY, NEW YORK

Figure Number
4

Project Number
1368.001.001

Date
AUGUST, 2016

Scale
NOT TO SCALE

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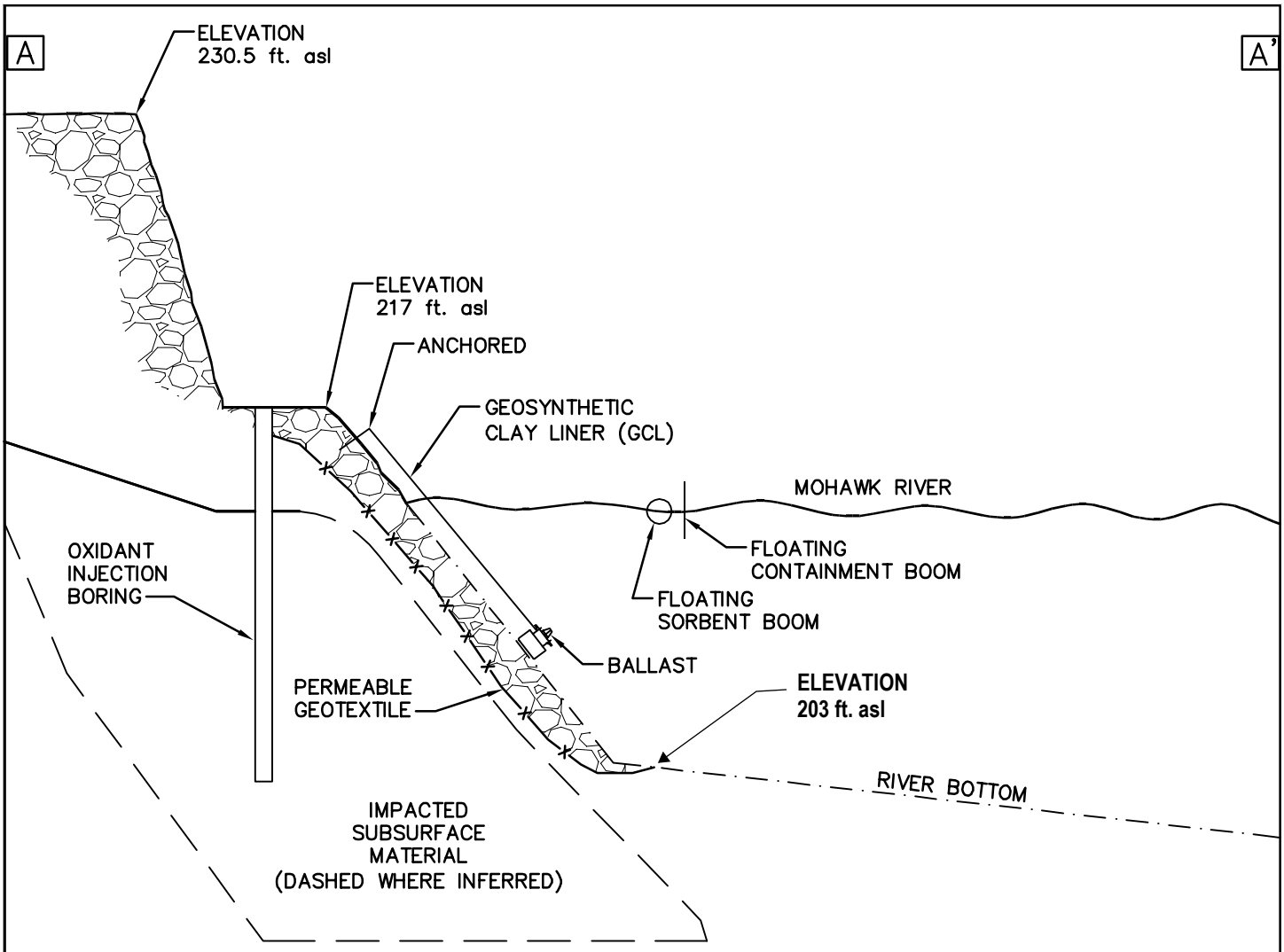
Figure 5

Conceptual Remedial Action and Containment



SECTION A–A'

Barton & Loguidice, D.P.C.

Date	Scale
AUGUST, 2016	NOT TO SCALE

MAXON ALCO HOLDINGS, LLC.
ALCO BROWNFIELD SITE

CONCEPTUAL REMEDIAL ACTION AND CONTAINMENT

SCHENECTADY, NY. SCHENECTADY COUNTY, NEW YORK

Figure Number
5

Project Number
1368.001.001

Plotted: Aug 25, 2016 - 8:50AM SYR By: lmw
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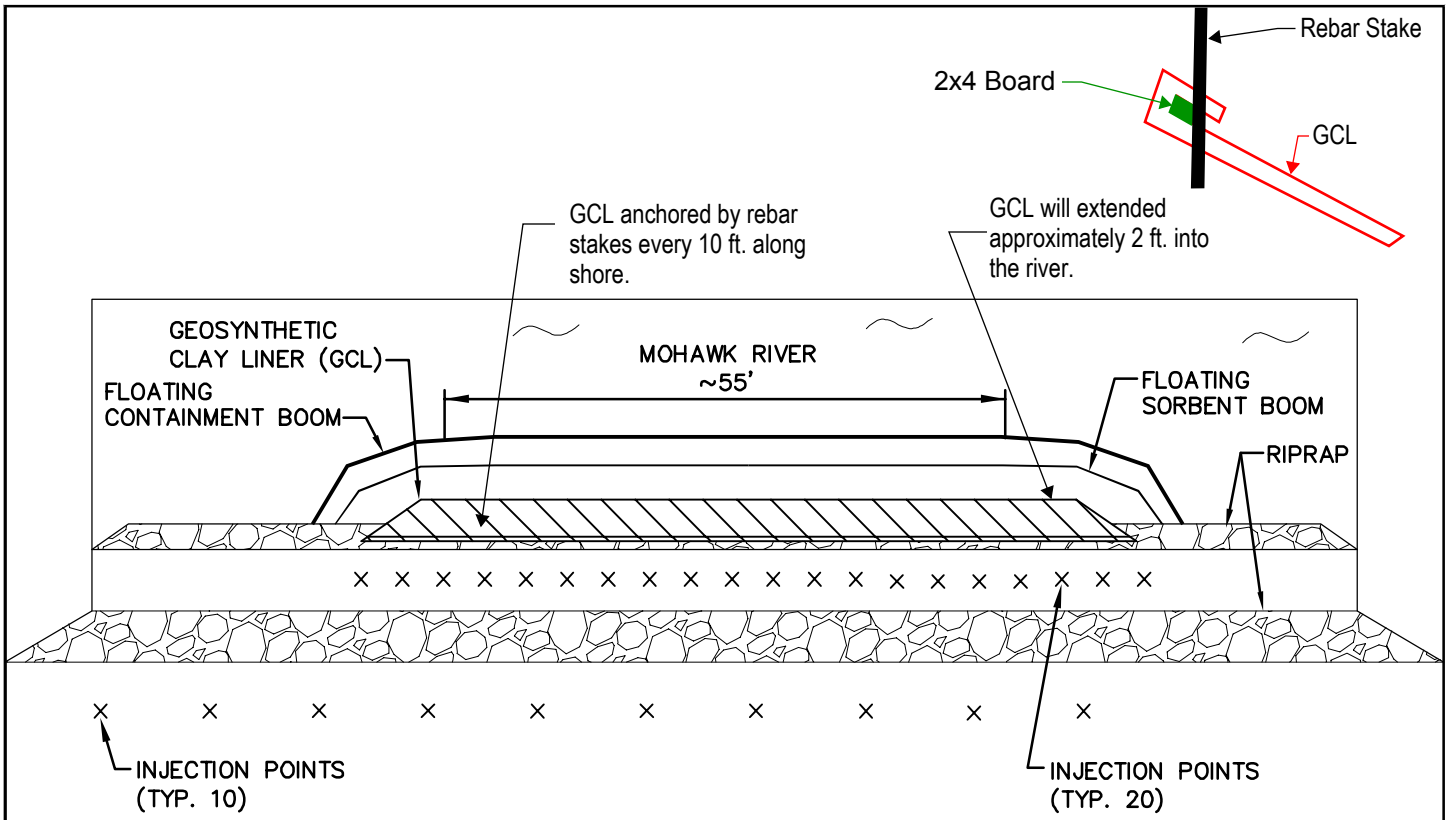
Figure 6

Aerial View of Conceptual Remedial Action and Containment



BIRDS EYE VIEW

Barton & Loguidice, D.P.C.

Date	Scale
SEPTEMBER, 2016	NOT TO SCALE

MAXON ALCO HOLDINGS, LLC.
ALCO BROWNFIELD SITE

AERIAL VIEW OF CONCEPTUAL REMEDIAL ACTION AND CONTAINMENT

SCHENECTADY, NY. SCHENECTADY COUNTY, NEW YORK

Figure Number
6

Project Number
1368.001.001

Appendix A

Health and Safety Plan

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady
Schenectady County, New York

Health and Safety Plan (HASP)

New York State
Brownfield Cleanup Program
Site Nos. C447042, C447043, and C447044

December 2013

Barton & Loguidice

Former ALCO Site
Brownfield Cleanup Project

City of Schenectady

Health and Safety Plan
Site Nos. C447042, C447043, and C447044

December 2013

Prepared For:

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

Prepared By:

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects
10 Airline Drive, Suite 200
Albany, New York 12205

Table of Contents

Table of Contents – Continued

Section Page

Tables

Attachments

1.0 General Information

1.1 Introduction

This Health and Safety Plan (HASP) was prepared by Barton & Loguidice, Inc. (B&L) for future excavation work at the former ALCO site where the existing soils will be penetrated. The existing soils contain residual impacts from historic activities at the site. The impacts were characterized by the Remedial Investigation and Supplemental Remedial Investigation that were conducted at the site. A summary of the impacts is provided in this HASP

Please note that this site falls within the definition of a hazardous waste sites for the purposes of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response*. Plan. This was prepared in accordance with 29 CFR 1910.120. This plan was prepared, and will be implemented, by a qualified person as defined under 29 CFR 1910.120; this is also in accordance with NYSDEC DER-10, *Technical Guidance for Site Investigation and Remediation.*

The purpose of this Health and Safety Plan for the Steel Treaters contaminant source removal IRM is to provide specific guidelines and establish procedures for the protection of personnel during the field investigation and site remediation activities. The Plan is based on the site information available at this time and anticipated conditions to be encountered during the different phases of work. This Plan is subject to modification as data are collected and evaluated.

All personnel conducting activities on-site must comply with all applicable Federal and State rules and regulations regarding safe work practices. Personnel conducting field activities must also be familiar with the procedures, requirements and provisions of this Plan. In the event of conflicting Plans and requirements, personnel must implement those safety practices that afford the highest level of protection.

This HASP is not intended to be used by any subcontractors, but it may be used as the basis for contractors to prepare their own plans. This HASP may not address the specific health and safety needs or requirements of subcontractors and should be viewed as the minimum requirement.

2.0 Project Information

2.1 Comprehensive Work Plan

This HASP is appended to the Site Remedial Work Plan (RWP) prepared by Barton & Loguidice, Inc., which describes the proposed remedial activities for the site.

2.2 Scope of Work

Remedial and/or development activities at the site may entail excavation into the existing in-place soils at the site.

2.3 Organization Structure

Barton & Loguidice, P.C.:
Program Manager – Scott Nostrand, P.E.

Site Manager – Andy Barber
Maxon ALCO Holdings, LLC (MAH):

Project Contact – Steve Luciano

The Site Manager is responsible for the day-to-day activities of the project and for coordinating between office and field personnel. The Site Manager will oversee the remedial activities. The Barton & Loguidice on-site field personnel will serve as the Site Safety and Health Coordinator (SSHC). The SSHC will establish operating standards and coordinate overall project safety and health activities for the site. The SSHC will review project plans and revisions to determine that safety and health procedures are maintained throughout the project. Specifically the responsibilities of the SSHC include:

a. Aiding the selection of protective clothing and equipment.

b. Periodically inspecting protective clothing and equipment.

c. Maintaining proper storage of protective clothing and equipment.

d. Monitoring the workers for signs of heat stress, cold stress, and fatigue.

e. Monitoring on-site hazards and conditions.

f. Conducting periodic surveillance to evaluate effectiveness of the Site-specific Health and Safety Plan.

g. Having knowledge of emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

h. Providing handouts to all on-site personnel that contain directions to the hospital and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

i. Notifying, when necessary, local public emergency officials.

j. Coordinating emergency medical care.

The Site Manager will be responsible for ensuring that the field personnel are familiar with the contents of this plan and the roles of the SSHC.

3.0 Health and Safety Risk Analysis

Table B-1 breaks down the hazard types that may be encountered for the site activities.

Table B-1
Site Investigation Activity Hazard Evaluation

Activity	Hazard Type					
	Mechanical	**Electrical**	**Chemical**	**Physical**	**Biological**	**Temperature**
Excavation of Impacted Soils	Accidental injury from excavation equipment. Accidental injury from contact with excavated materials.	Overhead power lines.	Accidental inhalation, ingestions, skin absorption or eye contact with contaminants. Inhalation of equipment exhaust gases.	Collapse of excavation structure. Puncture from buried objects/nails. Excessive noise. Fall hazards. Falling objects.	Rodents, Bees and wasps.	Heat stress and frost bite.

3.1 Chemical Hazards

Site soils have been impacted by historic industrial operations at the site. These impacts are largely related to the use of petroleum products and coal at the site. The contaminants that have been detected at the site are listed in Table B-2 and their properties are listed in Table B-3 (below).

Table B-2 – Contaminants Detected in Soil

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-A1	SS-A2	SS-A3	SS-A5	SS-A6	SS-A8	SS-A9
Parcel A										
2-Methylnaphthalene	*410*	*NS*	*NS*	57 J	**410 J**	130 J	**700 J**	3,500 U	**890 J**	**11,000 J**
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,300**	**6,000**	**5,500**	**4,500**	**1,800 J**	**24,000**	**160,000**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,700**	**6,700**	**6,800**	**4,200**	**2,100 J**	**21,000**	**140,000**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**3,100**	**12,000**	**14,000**	**6,700**	**4,400**	**25,000**	**170,000**
Benzo(G,H,I)Perylene	*100,000*	*100,000*	*500,000*	600 J	2,300	3,100	1,300	1,500 J	14,000	**98,000**
Benzo(k)Fluoranthene	*1,000*	*3,900*	*56,000*	**1,400**	**4,000**	**5,100**	**3,000**	**2,100 J**	**11,000**	**71,000**
Chrysene	*1,000*	*3,900*	*56,000*	**1,700**	**6,600**	**6,700**	**4,400**	**2,600 J**	**23,000**	**150,000**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	210 J	**820 J**	**880 J**	**370 J**	3,500 U	4,900 U	9,800 U
Dibenzofuran	*14,000*	*59,000*	*350,000*	31 J	710 J	260 J	1,100	3,500 U	2,300 J	**22,000**
Fluoranthene	*100,000*	*100,000*	*500,000*	1,800	11,000	8,700	9,900	2,700 J	44,000	**330,000**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**570 J**	**2,200**	**2,800**	**1,200**	**1,400 J**	**11,000**	**84,000**
Phenanthrene	*100,000*	*100,000*	*500,000*	600 J	9,100	4,600	9,300	1,300 J	35,000	**290,000**
Pyrene	*100,000*	*100,000*	*500,000*	1,700	8,800	7,100	7,400	2,200 J	40,000	**310,000**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-B3	SS-B4	SS-B5	SS-B6	SS-B8
Parcel B								
2-Methylnaphthalene	*410*	*NS*	*NS*	18,000 U	**620 J**	27 J	12 J	3,900 U
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**960 J**	**13,000**	850	**1,400**	**2,900 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,000 J**	**15,000**	**1,100**	**1,500**	**4,100**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	18,000 U	**20,000**	**1,300**	**3,900**	**5,000**
Benzo(k)Fluoranthene	*1,000*	*1,000*	*56,000*	18,000 U	**6,800**	480	**1,500**	**2,800 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,000 J**	**13,000**	890	**2,100**	**3,300 J**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	18,000 U	**7,700**	**550**	**1,600**	**2,100 J**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SS-C1	SS-C2	SS-C4	SS-C6	SS-C9
Parcel C								
2-Methylnaphthalene	*410*	*NS*	*NS*	6,900 U	7,000 U	**440 J**	65 J	2,000 U
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,500 J**	**4,600 J**	**49,000**	**3,900**	**1,500 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,700 J**	**6,400 J**	**43,000**	**3,700**	**1,600 J**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**2,000 J**	**9,600 J**	**50,000**	**4,500**	**2,000**
Benzo(k)Fluoranthene	*1,000*	*1,000*	*56,000*	**2,100 J**	**3,500 J**	**29,000**	**1,700 J**	**1,100 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,500 J**	**4,900 J**	**46,000**	**3,900**	**1,600 J**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	6,900 U	7,000 U	9,500 U	**680 J**	2,000 U
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**880 J**	**3,600 J**	**22,000**	**2,100**	**800 J**

All units are in µg/Kg
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Surface Soils

	Arsenic	Copper	Lead
Part 375 Residential	*16*	*270*	*400*
Part 375 Restricted Residential	*16*	*270*	*400*
Part 375 Commercial	*16*	*270*	*1,000*
Sample Location			
SS-A2	**18.8**	**723 J**	**1530**
SS-A3 / DUP-03	**32.1 / 19.6 J**	92.3 J/ 317 J	**897** / 298
SS-A9	**15.6 J**	67.3	95
SS-B3	**79.7 J**	15.7	16.4
SS-C7	**24.5**	37.9	8.8

J = Indicates an estimated value detected below the reporting limit.
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
All units are in mg/Kg

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	**Part 375 Restricted Residential**	**Part 375 Commercial**	SB-A1	SB-A2 / DUP-03	SB-A3
Parcel A						
2-Methylnaphthalene	*410*	*NS*	*NS*	**3,200 J**	48 J / 36 J	150 J
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**14,000**	**2,000 J / 1,300 J**	**1,800**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**14,000**	**1,900 J / 1,300 J**	**1,600**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**17,000**	**2,500 J / 1,400 J**	**1,800**
Chrysene	*1,000*	*1,000*	*56,000*	**15,000**	**2,000 J / 1,300 J**	**1,700**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	**2,800 J**	**370 J /** 220	280
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**8,400**	**1,100 J / 650 J**	**850**

All units are in µg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SB-B2 /	DUP-02-SB	SB-B3
Parcel B						
2-Methylnaphthalene	*410*	*NS*	*NS*	**860 J /**	**890 J**	55 J
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**13,000 /**	**13,000**	**3,800**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**13,000 /**	**13,000**	**3,900**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**14,000 /**	**15,000**	**5,600**
Chrysene	*1,000*	*1,000*	*56,000*	**12,000 /**	**13,000**	**5,000**
Dibenzo(A,H)Anthracene	*330*	*330*	*560*	**2,400 /**	**2,200**	400 U
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**7,000 /**	**6,400**	**2,700**

All units are in μg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-2 – Contaminants Detected in Soil – Continued

Contaminants Detected in Subsurface Soils

	Part 375 Residential	Part 375 Restricted Residential	Part 375 Commercial	SB-C3
Parcel C				
Benzo(a)Anthracene	*1,000*	*1,000*	*5,600*	**1,200 J**
Benzo(a)Pyrene	*1,000*	*1,000*	*1,000*	**1,200 J**
Benzo(b)Fluoranthene	*1,000*	*1,000*	*5,600*	**1,300 J**
Chrysene	*1,000*	*1,000*	*56,000*	**1,200 J**
Indeno(1,2,3-Cd)Pyrene	*500*	*500*	*5,600*	**700 J**

All units are in μg/Kg .
Values shown in BOLD exceed the 6 NYCRR Part 375 Residential Soil Cleanup Objective
Values that are highlighted exceeds the 6 NYCRR Part 375 Commercial Soil Cleanup Objective
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Table B-3 - Assessment of Detected Chemicals

Chemical Name (or class)	REL/PEL/TLV	Other Pertinent Limits (Specify)	Warning Properties – Odor Threshold	Potential Exposure Pathways	Acute Health Effects	Chronic Health Effects
#1 Fuel Oil (Kerosene)	100 mg/m3 (NIOSH)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
#2 Fuel Oil	5 mg/m3 (OSHA)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
#4 Fuel Oil	5 mg/m3 (OSHA)		Colorless to yellowish oily liquid with a strong characteristic odor	Inhalation, Ingestion, Contact	Eye, skin & respiratory irritation; dizziness, drowsiness, nausea, vomit, headache, abdominal pain	Eyes; skin; respiratory system; CNS
Polynuclear Aromatic Hydrocarbons (Coal components)	0.1 mg/m3 (NIOSH) 0.2 mg/m3 (OSHA)		Black, dark brown residue	Inhalation, Ingestion, Contact	Skin irritation	Respiratory system; skin, bladder; kidneys
Arsenic				Inhalation, Ingestion, Contact	Skin irritation	Eyes; skin; respiratory system; CNS; kidneys; GI tract; repro system
Copper	1 mg/m3 (OSHA, NIOSH)		Reddish metal	Inhalation, Ingestion, Contact	Eye irritation	Eyes; skin; respiratory system; liver; kidneys;
Lead	0.050 mg/m3 (OSHA, NIOSH)		Gray metal	Inhalation, Ingestion, Contact		Eyes; CNS; kidneys; GI tract; blood

PEL = OSHA Permissible Exposure Limit; represents the maximum allowable 8-hr. time weighted average (TWA) airborne exposure concentration.
TLV = ACGIH Threshold Limit Value; represents the maximum recommended 8-hr. TWA exposure concentration.
STEL = OSHA Short-term Exposure Limit; represents the maximum allowable 15 minute TWA exposure concentration.
TLV-STEL = ACGIH Short-term Exposure Limit; represents the maximum recommended 15 minute TWA exposure concentration.

3.2 Physical Hazards

Physical hazards associated with the site are:

1. *Slip, Trip, and Fall During All Activities (Uneven Terrain):* The site contains numerous potential safety hazards such as pits, broken glass, slippery surfaces and fire debris. The work itself may be a potential safety hazard. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.
2. *Excavation Debris:* Excavation projects pose potential safety hazards from materials falling from the excavator as they are removed from the working excavation. The excavation work is a potential safety hazard and the SSHC will provide oversight during demolition activities.
3. *Moving Parts of Heavy Equipment:* Heavy equipment poses dangers though moving parts. Where feasible, access to moving parts will be guarded and equipment will be equipped with backup alarms.
4. *Noise from Heavy Equipment:* Work around large equipment often creates excess noise. Engineering controls and personal protective equipment will be used to protect employees' hearing.
5. *Electrical Hazards:* As in all site work, overhead power lines, buried power lines, electrical wires and cables, site electrical equipment, and lightning also pose a potential hazard to site workers. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.
6. *Biological Hazards (Insects, Poison Ivy, etc.):* Other biological hazards that may be present at the site include rodents and insects. PPE can reduce the potential for exposure. The SSHC can assist in determining the correct PPE for the hazard present.

3.3 Heat and Cold Stress

Workers will be routinely observed by the SSHC for symptoms of heat stress or cold exposure, as dictated by the weather conditions and work being conducted. Heat stress and cold exposure can be avoided by periodic, regular rest breaks.

Heat stress may be a potential hazard for personnel wearing PPE, particularly working in hot and humid conditions. Workers should take regular rest breaks within a shaded area, removing their PPE, and drink electrolyte replacing liquids and/or water. The SSHC is responsible for scheduling the amount of time each individual can work under the existing site conditions, and how often and how long they will break. Workers will be required to take their breaks in the clean zone after going through the decontamination area , or they may undergo partial decontamination and rest in a clean area within the decontamination area. Please refer to Section 7.2 (Site Control) of this HASP for a detailed description of the above referenced clean zone and decontamination area.

3.4 Confined Space Entry

Excavations do pose a potential confined space entry area. When an excavation becomes a confined space entry area (greater than 4 feet deep), then permit-required confined space entry procedures will be followed should the excavation need to be entered. In addition, air monitoring for oxygen deficiency, LEL, and organic vapors will be performed should the excavation be greater than 4 feet deep. Attempts will be made to collect samples from the excavation without entering the excavation (i.e., from excavator bucket, sampling rods, etc.).

4.0 Medical Surveillance Program

4.1 General

OSHA in 29 CFR 1910.120, the Hazardous Waste Operations regulations and in 1910.134, the Respiratory Protection regulations, requires medical examinations. The examination may include the OSHA required Medical Questionnaire, Respirator Suitability Form, a Medical Examination, Audiology Test, Pulmonary Function Test, and testing for complete blood count and chemistry profile.

These medical examinations and procedures are performed by or under the supervision of a licensed physician. The medical monitoring is provided to workers free of cost, without loss of pay and at a reasonable time and place. In addition, the need to implement a more comprehensive medical surveillance program will be re-evaluated after an apparent over-exposure incident.

Employees who wear, or may wear, respiratory protection will be provided respirators as regulated by 29 CFR 1910.134 before performing designated duties. Prior to issuance of a respirator, a medical professional must have medically certified the individual's ability to wear respiratory protection. Where the medical requirements of 29 CFR 1910.120 overlap those of 29 CFR 1910.134, the more stringent of the two will be enforced. It is not anticipated the respirator use will be required at the site.

4.2 Frequency

1. *Baseline Examinations:* Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive a baseline examination prior to job assignment.

2. *Periodic Examinations:* Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive periodic examinations as required.

3. *Termination Examinations:* Field employees permanently leaving the company who were in the medical surveillance program will receive an exit examination.

4. *Possible Exposure Examinations:* As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that an employee has been injured or exposed above the permissible exposure limits in an emergency situation, that employee will be required to receive medical attention.

4.3 Examination Results

A letter must be received from the attending physician stating the parameters of the examination and whether or not the individual is able to work with or without restriction. This letter will be filed in the employee's file and a copy distributed to the employee. The examining physician makes a report to B&L of any medical condition that would place B&L employees at increased risk when wearing a respirator of other personal protective equipment. B&L maintains the medical records of personnel, as regulated by 29 CFR 1910.120 and 29 CFR 1910.1020, where applicable.

5.0 Training Program

5.1 Hazardous Waste Operations Health and Safety Training

Employees who are assigned to perform duties on hazardous waste sites will receive the OSHA initial 40-hour health and safety training prior to on-site activities, in accordance with 29 CFR 1910.120 (e). In addition, such personnel provide documentation of having received three (3) days of supervised field experience applicable to this site, or receive three (3) days of supervised field experience at this site. Applicable employees will receive yearly 8-hour refresher courses. On-site managers and supervisors who are directly responsible for or who supervise workers engaged in hazardous waste operations receive, in addition to the appropriate level of worker HAZWOPER training described above, 8 (eight) additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4).

Because this site is meets the definition of a hazardous waste site, employees who work during field activities are required to have completed HAZWOPER initial and refresher training.

5.2 Additional Training

As site activities change, supplemental training will be provided to employees to address changes in identified hazards, risks, operations procedures, emergency response, site control, and personal protective equipment. Specialty training will be provided as determined by task and responsibility.

Site-specific training will be provided to each employee and will be reviewed at safety briefings. Specialized training will be provided as dictated by the nature of site activities. Specialized training will be provided for activities such as the handling of unidentified substances. Employees involved in these types of activities will be given off-site instruction regarding the potential hazards involved with such activities and the appropriate health and safety procedures to be followed. Off-site instruction is meant to include any areas where employees will not be exposed to site hazards.

5.3 Other Required Training

Other training that may be required by workers that is in addition to required training described above is detailed below:

- Hazard communication, in accordance with 29 CFR 1910.1200
- Respirator use, in accordance with 29 CFR 1910.134
- Hearing conservation, in accordance with 29 CFR 1910.95
- Working safely around heavy equipment
- Heat and cold stress prevention
- Confined space entry, in accordance with 289 CFR 1910.146

5.4 Pre-Entry Briefing

A site-specific briefing will be provided to all individuals, including site visitors, who enter this site beyond the site entry point. For visitors, the site-specific briefing provides information about site hazards, the site lay-out including work zones and places of refuge, the emergency alarm system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

The SSHC will brief personnel as to the potential hazards likely to be encountered. Topics will include:

- Availability of this HASP.
- General site hazards and specific hazards in the work areas, including those attributable to the chemicals present.
- Selection, use, testing and care of the body, eye, hand and foot protection being worn, with the limitations of each.
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the site.
- Emergency response procedures and requirements.
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed.
- Methods to obtain emergency assistance and medical attention.

5.5 Training Records

Written certification of the successful completion of applicable training requirements for each worker will be maintained on-site during the course of the investigation. Written certificates have been given to each person so certified. Additionally, an employee sign off sheet indicating that each worker has reviewed a copy of this HASP and understands its contents is stored at the same location.

6.0 Health and Safety Field Implementation

6.1 Personal Protective Equipment Requirements

The requirements for personal protective equipment (PPE) are outlined in Table B-4. Level D protection will initially be worn for excavation activities. Level C protection may be used, based upon a sustained (five (5) minutes or more) readings above five (5) parts per million (ppm) measured with the photoionization detector (PID). The emissions from gasoline or diesel-powered excavation equipment may affect PID readings. At the start of work (excavation equipment in operation, but prior to exposing contaminated soils), an ambient PID reading will be established. This ambient PID reading will be subtracted from subsequent readings to evaluate PPE usage.

Table B-4
Personal Protective Equipment (PPE) Requirements

Job Tasks	Level of Protection	PPE						
		Suit	Gloves	Feet	Head	Eye	Ear	Respirator
Down-grade	Modified D	Std.	Neoprene or Nitrile	Steel + Booties	HH	Glasses/ Goggles	Plugs/ Muffs	N/A
All on-site	C	PE Tyvek	Neoprene or Nitrile	Steel + Booties	HH	N/A	Plugs/ Muffs	Full APR w/OV& N100

Personal Protective Equipment

SUIT:
Std = Standard Work Clothes
PE Tyvek = Polyethylene-coated Tyvek

FEET:
Steel = Steel-toe Boots
Booties = PVC or Latex Booties

HEAD:
HH = Hard Hat

EYE:
Glasses = Safety Glasses w/side shields
Goggles = Safety Goggles

Personal Protective Equipment

EAR:
Plugs = Ear Plugs
Muffs = Ear Muffs

RESPIRATOR:
APR = Air-purifying respirator
Full APR = Full-face APR
OV = Organic vapor cartridge
N100 = N100 particulate filters

6.2 Community Air Monitoring Plan

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.

This 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 as part of the IRM. 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**.** The various field instruments that will be used by on-site personnel to perform the continuous air monitoring are listed in Table B-5 below. Subsurface intrusive activities include, but are not limited to, soil excavation and handling.

VOCs will be monitored at the downwind perimeter of the site, outside the existing building on a continuous basis with the use of a Photoionization detector (PID). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the site exceeds five (5) parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below five (5) ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the site persist at levels in excess of five (5) ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below five (5) ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the site, activities must be shutdown.

All 15-minute readings will be recorded and made available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision making purposes will also be recorded.

Particulate concentrations will also be monitored continuously at the upwind and downwind perimeters of the exclusion zone or work area during the performance of the IRM. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques if downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and if no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume if dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and made available for NYSDEC and NYSDOH personnel to review.

Table B-5
Monitoring Protocols and Contaminant Action Levels

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Breathing Zone* Action Level Concentrations	
			Monitored Level For Mandatory Respirator Use**	Monitored Level For Mandatory Work Stoppages***
VOCs	Photoionization detector (PID) with an 10.6 eV lamp	Initially readings will be recorded every 15 minutes. If no sustained readings are obtained in the breathing zone, readings will be recorded every 30 minutes.	5 ppm above background	25 ppm above background

Table B-5
Monitoring Protocols and Contaminant Action Levels

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Breathing Zone* Action Level Concentrations	
			Monitored Level For Mandatory Respirator Use**	Monitored Level For Mandatory Work Stoppages***
Particulates	MiniRam or Dusttrak or Equivalent	Continuously during intrusive activities that can generate dust, e.g. monitoring well installation, test pits		150 ug/m3 at fence line (institute engineering controls to control dust) per NYSDEC TAGM 4031

* Monitoring performed in the breathing zone for sustained readings of 5 minutes or more. Monitor source first; if the source is near or above the action level concentration, monitor in the breathing zone.
** Monitored levels will require the use of approved respiratory protection specified in Table B-3.
*** Consult the Site manager.

6.3 Decontamination Procedures

Depending on the specific job task, decontamination may include personnel themselves, tools, and/or heavy equipment. The specified level of protection for a task (A, B, C, or D) does not itself define the extent of personal protection or equipment decontamination. For instance, Level C without dermal hazards will require less decontamination than Level C with dermal hazards. Heavy equipment will always require decontamination to prevent cross-contamination. The following sections summarize general decontamination protocols.

6.3.1 Heavy Equipment

Heavy equipment will be decontaminated prior to personnel decontamination. Heavy equipment, drilling rods, augers and/or buckets will be steam cleaned after use at the designated decontamination area. In addition, containment systems will be set-up at the designated decontamination area for collection of decon fluids and materials.

6.3.2 Personnel

In general, decontamination involves scrubbing with a non-phosphate soap/water solution followed by clean water rinses. Disposable items will be disposed of in a dry container.

Reusable protection will be washed with soap and clean potable water and air-dried prior to storage. Dirt, oil, grease or other foreign materials that are visible will be removed from surfaces. Scrubbing with a brush may be required to remove materials that adhere to the surfaces. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may be discarded in a designated container. Rubber components can be soaked in soap and water and scrubbed with a brush.

The following decontamination protocol will be used, as appropriate to the level of PPE being used:

- Drop hand tools and equipment in the designated decontamination area.
- Either wash outer rubber boots or dispose of booties.
- Rinse outer boots.
- Wash and rinse outer gloves.
- Remove outer boots and gloves, dispose gloves if necessary in the container designated for PPE waste.
- Replace cartridges if required.
- Remove and dispose Tyvek coverall in the designated PPE waste container.
- Remove respirator, dispose cartridges as required in the container designated for PPE waste.
- Personnel should wash their respirator at the end of each workday.

6.3.3 Decontamination Wastes and Investigation Derived Wastes

Decontamination wash and rinse waters and investigation derived wastes (IDW) will be managed according to applicable regulatory guidelines.

- Spent decon solutions may be required to be drummed and disposed of as hazardous waste and/or solvent solutions may be required to be segregated from water rinses.
- Decontamination shall be performed in a manner that minimizes the amount of waste generated.
- IDW may be required to be drummed and disposed of as hazardous waste.

7.0 Site Operating Procedures

These following guidelines comply with the established guidelines of the Barton & Loguidice, P.C., Corporate Health and Safety Program:

All field investigation activities must be coordinated through the Site Manager.

During any activity conducted on-site in which a potential exists for exposure to hazardous materials, accident or injury, at least two (2) persons must be present who are in constant communication with each other. At least two (2) persons must also be present during all demolition or excavation activities.

Samples obtained from areas known or suspected to contain contaminated substances or materials must be handled with appropriate personal protection equipment.

All equipment used to conduct the Site Investigation must be properly decontaminated and maintained in good working order. Equipment must be inspected for signs of defects and/or contamination before and after each use.

The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated will result in the evacuation of the activity zone until a complete evaluation of the hazard can be performed.

7.1 Daily Operating Procedures

The following are the daily operating procedures that are to be followed by on-site personnel:

- Hold Tailgate Safety Meetings prior to work start and as needed thereafter (suggest daily; however, minimum of weekly).
- Use monitoring instruments and follow designated protocol and contaminant action levels.
- Use PPE as specified.
- Use hearing protection around heavy equipment.
- Remain upwind of operations and airborne contaminants, if possible.
- Establish a work/rest regimen when ambient temperatures and protective clothing create potential thermal hazards.
- Eating, drinking, applying cosmetics and smoking are prohibited in work areas.
- Refer to the SSHC for specific safety concerns for each individual site task.
- On-site personnel are encouraged to be alert to their own physical condition, as well as their co-workers.
- **All accidents, no matter how minor,** must be immediately reported to the SSHC.

7.2 Site Control

The purpose of site control is to minimize the exposure of site workers to potential contamination, protect the public from the site's hazards, and prevent vandalism. The degree of site control necessary depends on site characteristics and the surrounding community. At this time, there are no access restrictions to the site. During the field activities, Barton & Loguidice, P.C. (B&L), and Steel Treaters are requesting that personnel, subcontractors and visitors report to the on-site B&L supervisor prior to entering the work area.

Since there are no access restrictions to the Site, particular attention will be placed on the condition of the site regarding three (3) main work zone areas:

Activity Zone

This zone applies to the immediate work area and includes all materials, equipment, vehicles and personnel involved in the site activity. For example, during the installation of a monitoring well, the activity zone will encompass the borehole, drilling rig, monitoring well construction materials and equipment, sampling equipment, decontamination supplies, and drilling/well inspection personnel. Site control measures will include flagging the perimeter of the activity zone to clearly mark the limits of work and to warn passers-by and visitors of the site activity. In addition, the site supervisor will maintain communication with City personnel as the location of this zone (and the type of work being performed) changes throughout the project.

The required level of PPE in the activity zone can vary according to job assignment. This will allow a flexible, effective, and less costly operation, while still maintaining a high degree of safety.

This area will be limited to authorized personnel from B&L, regulatory agencies, and contractors/subcontractors to the B&L and/or Steel Treaters. Personnel entering this area will be required to comply with their own HASP that is at least as stringent as this HASP.

Decontamination Zone

In order to prevent incidental contact with contaminants on investigation equipment or in the wash water, activities within the decontamination area will be completed before subsequent site work or other activity begins. This includes:

- Complete removal of contaminants on all equipment used during the preceding phase of the investigation;
- Placement of the waste wash water and sediment in sealed drums;
- Storage of the drums in a secure and out-of-the-way place for future disposal;
- Proper labeling of drum contents;
- Cleanup (if necessary) of area outside of decontamination area; and

Support Zone

The support zone is the location of the administrative and other support functions needed to keep the operations in the activity and decontamination zone running smoothly. Any function that need not or cannot be performed in a hazardous atmosphere is performed here. Personnel may wear normal work clothes within this zone. Any potentially contaminated clothing, equipment and samples must remain in the decontamination zone until decontaminated. All emergency telephone numbers, change for the telephone (if necessary), evacuation route maps, and vehicle keys should be kept in the support zone.

The SSHC will establish a decontamination system and decontamination procedures appropriate to the site and the work that will prevent potentially hazardous materials from leaving the site. All personnel exiting the activity zone will be decontaminated prior to entering the support zone. The decontamination procedures will be reviewed at each daily safety briefing.

Personal hygiene facilities meeting at least the minimum requirements of 29 CFR Part 1910.120 will be provided nearby.

Upon completion of the day's activities, heavy machinery and equipment will be stored securely within the site, or at a location selected by the SSHC.

7.3 Buddy System

Most activities in a contaminated or otherwise hazardous area should be conducted with a partner who is able to:

- Provide his or her partner with assistance.
- Observe his or her partner for signs of chemical or heat exposure.
- Periodically check the integrity of his or her partner's protective clothing.
- Notify the SSHC if emergency help is needed.

7.4 Engineering Controls

Engineering controls and work practices are primarily for limiting exposure through application of engineered barriers. They will be applied to this project when and where they are practicable. The following engineering controls may be applied on this project: water spray, covering of materials, site preparation to facilitate operations and remove obvious physical hazards, and warning alarms/devices.

8.0 Emergency Response Procedures

8.1 Pre-Emergency Planning

Planning for emergencies is a crucial part of emergency response. The SSHC is responsible for training all employees in potential site hazards and the emergency response procedures.

8.2 Personnel Roles

The SSHC is responsible for responding to, or coordinating the response of, off-site personnel to emergencies. In the event of an emergency, the SSHC will direct all notification, response and follow-up actions. Contacts with outside response personnel (hospital, fire department, etc.) will be done at the direction of the SSHC.

Prior to the start of work on the site, the SSHC will:

1. Notify emergency contacts, and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the activities performed on-site;
2. Confirm that the following safety equipment is available: eyewash and safety shower station, first aid supplies, air horn, and fire extinguishers;
3. Have a working knowledge of the safety equipment available; and
4. Confirm directions to the hospital are prominently posted with the emergency telephone numbers.

Employees who will respond to emergencies involving hazardous materials will be trained in how to respond to such emergencies.

The SSHC will check daily to see that the following safety equipment is available at the site: eyewash station, first aid supplies, and fire extinguisher.

The SSHC will be responsible for directing notification, response and follow-up actions and for contacting outside response personnel (ambulance, fire department or others) prior to and during an emergency. Upon notification of an exposure incident, the SSHC will call the Hospital and fire and police emergency response personnel for recommended medical diagnosis, treatment, if necessary, and transportation to the hospital.

The SSHC must conduct an investigation of the incident as soon as possible. The SSHC will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring. The resulting report must be accurate, objective, complete and signed and dated.

8.3 Safe Distances and Places of Refuge

In case of an emergency, a designated off-site area will serve as the immediate place of refuge. Personnel in the exclusion zone should evacuate through the decontamination zone to the refuge location, both for their own personal safety and to prevent hampering response/rescue efforts. Following an evacuation, the SSHC will account for on-site personnel. If evacuation from the work site is necessary, the project vehicles will be used to transport on-site personnel to a place of refuge.

8.4 Emergency Communications

There will be a cellular telephone located in either the Site Manager's and/or SSHC's vehicle for emergency use. Emergency telephone numbers are listed in Attachment 7 of this HASP. There will be air horns, walkie-talkies, and/or other audible emergency signals located within the exclusion zone and decontamination area to signal others of an emergency. The SSHC should brief all personnel regarding audible emergency signals to be used during the site activities prior to starting the work. Site personnel will use the following hand signals to inform others of emergencies:

- Hand gripping throat - out of air, cannot breathe.
- Grip partner's wrist or both hands around waist - leave area immediately.
- Hands on top of head - need assistance.
- Thumbs up - everything's OK, or I understand.
- Thumbs down – No.

8.5 Emergency Procedures

The nature of work at a contaminated or potentially contaminated work site makes emergencies a continual possibility. Although emergencies are unlikely and occur infrequently, a contingency plan is required to assure timely and appropriate response actions. The contingency plan is reviewed at tailgate safety meetings.

8.5.1 Incident Procedures

If an emergency incident occurs, the following actions will be taken:

1. Size-up the situation based upon available information.
2. Notify the SSHC.
3. Only respond to an emergency if personnel are sufficiently trained and properly equipped.
4. As appropriate, evacuate site personnel and notify emergency response agencies, e.g., police, fire, etc.

5. As necessary, request assistance from outside sources and/or allocate personnel and equipment resources for the response.
6. Consult the posted emergency telephone list and contact key project personnel.
7. Prepare an incident report.

All site personnel should be aware of the location of fire fighting equipment. Personnel shall only extinguish minor fires. Large fires will require contacting the local fire department and allowing them to handle the fire. The local fire department will be contacted prior to initiating site activities to inform them of the potential hazardous materials that could be encountered in an emergency.

8.5.2 Medical Emergencies

In the event of an accident or injury, workers will immediately implement emergency decontamination and isolation measures to assist those who have been injured or exposed and to protect others from the hazards. Upon notification of an exposure incident, the SSHC will contact the emergency response personnel who can provide medical diagnosis and treatment. If necessary, immediate medical care will be provided by trained personnel competent in first aid procedures. Trained personnel competent in such matters will only provide other on-site medical and/or first aid response to an injury or illness.

If an individual is transported to a hospital or doctor, a copy of this HASP will accompany the individual.

The SSHC will be notified when an accident or incident occurs and will respond according to the seriousness of the incident. The SSHC will investigate facility/site conditions to determine whether and at what levels exposure actually occurred, the cause of such exposure and the means to be taken to prevent the incident from recurring.

The SSHC and the exposed individual will complete an exposure-incident investigation. The SSHC will prepare a signed and dated report documenting the investigation. The SSHC and the exposed individual will also complete an exposure-incident reporting form. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

Emergency first aid may include taking care of minor scrapes to performing CPR. All site personnel should be familiar with the location of the site first aid kits. The site safety officer should be trained in first aid and CPR. Contacting hospital and/or emergency agencies shall be made on a case by case basis depending on the severity of the injury. If an off-site emergency agency is contacted, all the details relating to the injury should be relayed to that agency. All site injuries should be documented. The following actions should be taken if someone requires first aid:

1. Survey the scene to determine if it is safe to reach the injured person.

2. Ask the injured person what happened. If the person is unconscious, look for signs as to what may have occurred.
3. See if there are others injured.
4. Reassure the victim. Contact others for help; tell them to call the appropriate emergency agency.
5. If it is safe to move the victim, return them back to the field office.

Only trained personnel should perform CPR or rescue breathing on an unconscious victim.

Personnel who experience heat stress or frost bite should be attended to in the following manner:

Heat Stress - Symptoms include cool, pale and moist skin, heavy sweating, headache, and nausea. This person should be removed from the hot environment immediately, and allowed to lie on their back. Apply cold packs or make sure they are in an air-conditioned room. Give them plenty of water and/or electrolyte-replacing fluids. Should a victim experience heat stroke (high body temperature, red skin) the body must be cooled down quickly and receive medical attention immediately. Persons experiencing heat stress or heat stroke should be attended to until the situation has been remedied.

Frostbite - Symptoms include slightly flushed skin that becomes white, pain at extremities in early stages. Get a victim experiencing frostbite to a warm area and put the frostbitten parts in warm (100-105º F) water. Loosely bandage injured parts after soaking.

Hypothermia - Under conditions of cold temperatures and high winds, there is the potential for workers experiencing hypothermia. Signs of hypothermia include: shivering, dizziness, numbness, confusion, or drowsiness. Warm up this person's body with dry clothes and a blanket, if available. Call the appropriate emergency agency or take this person to the hospital.

8.6 Emergency Routes

Should an emergency signal be sounded, on-site personnel should immediately stop what they are doing, and return to the decontamination area. Personnel in the decontamination area and the support zone should evaluate the emergency and contact the appropriate off site emergency personnel. Once on site personnel return to the decontamination area, there will be someone there to direct them as to what to do. It is imperative that the SSHC or designated alternate account for all site personnel. The SSHC should direct all personnel to the nearest safe refuge.

The hospital route is included as an attachment.

If the emergency event threatens the surrounding community, it is important that the local police and fire departments be contacted immediately regarding the potential danger.

8.7 Spill Control

A major spill is not anticipated at the site. Should a spill of any type occur, the employee should report it immediately to the SSHC, who will make arrangements for the proper cleanup of the spill. These arrangements will include diking and ditching, as necessary, as well as the use of absorbents such as vermiculite or Speedi Dry. The emergency response personnel will be contacted immediately by SSHC in the event that on-site materials can not immediately contain the spill.

8.8 Personal Protective and Emergency Equipment

There will be suitable equipment on site for small emergency events such as additional PPE, fire extinguishers and first aid kits. In the event of a major emergency event, off-site personnel will be contacted immediately.

8.9 Decontamination Procedures

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Minimum decontamination will consist of detergent washing, rinsing, and removal of contaminated outer clothing and equipment. If time does not permit the completion of all of these actions, it is acceptable to remove the contaminated clothing without washing it. If the situation is such that the contaminated clothing cannot be removed, the person should be given required first aid treatment, and then wrapped in plastic or a blanket prior to transport to medical care. If heat stress is a factor in the victim's illness/injury, the outer protective garment will be removed immediately.

8.10 Evacuation Routes

Unless otherwise directed, evacuation will be made through the decon area to the designated refuge location for a head count.

8.11 Response Critique

Should an incident on-site occur, the SSHC will analyze the response efforts in order to continually improve on-site conditions and procedures. The SSHC must complete follow-up activities before on-site work is resumed following an emergency. Used emergency equipment must be recharged, refilled or replaced. Government agencies must be notified as required in their regulations.

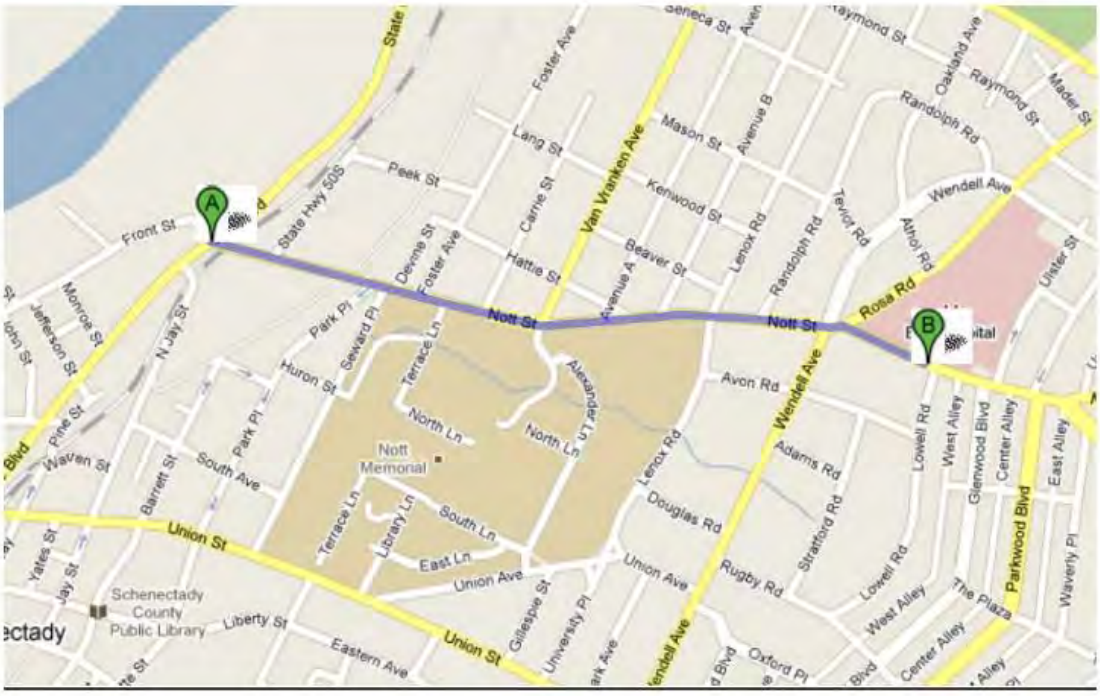
Attachment 1

Driving directions to Ellis Hospital
1.0 mi – about **2 mins**

A 301 Nott St
Schenectady, NY 12305

1. Head **east** on **Nott St** toward **Erie Blvd/Maxon Rd** 1.0 mi
Destination will be on the left

B Ellis Hospital
1101 Nott St
Schenectady, NY



(This should be posted at a conspicuous location at the site.)

Attachment 2

Emergency Contacts
(To Be Posted)

Contact	Person or Agency	Phone Number
Maxon-ALCO Holdings LLC	Steve Luciano	(518) 356-4445
NYSDEC Region 4 Project Manager	John Strang	(518) 357-2390
Law Enforcement	(C) Schenectady PD	911
Fire Department	(C) Schenectady FD	911
Confined Space Rescue (Fire Department)	(C) Schenectady FD	911
Ambulance		911
Hospital - Emergency	Ellis Hospital	(518) 243-4000
B&L Site Manager/Site Safety Officer	Andrew J Barber	(518) 218-1801
B&L Officer-in-Charge	Scott D. Nostrand, P.E.	(315) 457-5200

Appendix B

Manufacturer's Literature

REGENESIS

Advanced Technologies for Contaminated Site Remediation

RANGE OF TREATABLE CONTAMINANTS

	ISCO			Aerobic Bio	Anaerobic Bio				ISCR
RANGE OF TREATABLE CONTAMINANTS	RegenOx®	PetroCleanze®	PersulfOx®	ORC® Advanced	3-D Microemulsion®	HRC®	HRC-X®	BDI® Plus	CRS®
BTEX									
Benzene	✓	✓	✓	✓					
Toluene	✓	✓	✓	✓					
Ethylbenzene	✓	✓	✓	✓					
Xylene	✓	✓	✓	✓					
Petroleum Hydrocarbons									
Gasoline Range Organics (GRO) (C_6-C_{10-12})	✓	✓	✓	✓					
Diesel Range Organics (DRO) (C_{8-12}-C_{24-28})	✓	✓	✓	✓					
Oil Range Organics (ORO) (C_{22-32})	✓	✓	✓	✓					
Creosote (coal tar)	✓	✓	✓	✓					
Oxygenates									
Methyl tert-butyl ether (MTBE)	✓	✓	✓	✓					
Tert-butyl alcohol (TBA)	✓	✓	✓	✓					
Chlorinated Solvents									
Tetrachloroethylene (PCE)	✓	✓	✓		✓	✓	✓	✓	✓
Trichloroethene (TCE)	✓	✓	✓		✓	✓	✓	✓	✓
cis-1,2 Dichloroethene (DCE)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vinyl chloride (VC)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tetrachloroethane	✓	✓	✓		✓	✓	✓	✓	✓
Trichloroethane (TCA)	✓	✓	✓		✓	✓	✓	✓	✓
Dichloroethane (DCA)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carbon tetrachloride	✓	✓	✓		✓	✓	✓		✓
Chloroethane	✓	✓	✓	✓	✓	✓	✓		✓
Chloroform	✓	✓	✓		✓	✓	✓		✓
Chloromethane	✓	✓	✓		✓	✓	✓		✓
Chlorotoluene	✓	✓	✓	✓	✓	✓	✓		✓
Methylene chloride	✓	✓	✓		✓	✓	✓		✓
Dichloropropane	✓	✓	✓		✓	✓	✓		✓
Dichloropropene	✓	✓	✓		✓	✓	✓		✓
Hexachlorobutadiene	✓	✓	✓		✓	✓	✓		✓
Trichloropropane	✓	✓	✓		✓	✓	✓		✓
Bis(2-chloroethyl)ether	✓	✓	✓		✓	✓	✓		✓
Bis(2-chloroethoxy)methane	✓	✓	✓		✓	✓	✓		✓
PAHs									
Acenaphthene	✓	✓	✓	✓					
Acenaphthylene	✓	✓	✓	✓					
Anthracene	✓	✓	✓	✓					
Benzo(a)anthracene	✓	✓	✓	✓					
Benzo(a)pyrene	✓	✓	✓	✓					
Benzo(b)fluoranthene	✓	✓	✓	✓					
Benzo(ghi)perylene	✓	✓	✓	✓					
Bis(2-ethyhexyl)phthalate	✓	✓	✓	✓					
n-butylbenzene	✓	✓	✓	✓					
Chrysene	✓	✓	✓	✓					
Dibenzo(ah)anthracene	✓	✓	✓	✓					
Fluorene	✓	✓	✓	✓					
Naphthalene	✓	✓	✓	✓					
Nitrobenzene	✓	✓	✓	✓					
Phenathrene	✓	✓	✓	✓					
Propylbenzene	✓	✓	✓	✓					
4-iso-propyltoluene	✓	✓	✓	✓					
Pyrene	✓	✓	✓	✓					
Styrene	✓	✓	✓	✓					
Trimethylbenzene	✓	✓	✓	✓					
Chlorobenzenes									
Chlorobenzene	✓	✓	✓	✓					
Dichlorobenzene	✓	✓	✓	✓					
Trichlorobenzene	✓	✓	✓	✓					
Phenols									
Phenol	✓	✓	✓	✓					
4-chloro-3-methyl phenol	✓	✓	✓	✓					
2-chlorophenol	✓	✓	✓	✓					
2,4-dichlorophenol	✓	✓	✓	✓					
2,4-dinitrophenol	✓	✓	✓	✓					
4-nitrophenol	✓	✓	✓	✓					
Pentachlorophenol				✓	✓	✓	✓		✓
Haloalkanes									
Dichlorodifluoromethane (Freon 12)					✓	✓	✓		✓
Trichlorofluoromethane (Freon 11)					✓	✓	✓		✓
Trichlorotrifluoroethane (Freone 113)					✓	✓	✓		✓
Pesticides & Herbacides									
α-Chlordane					✓	✓	✓		✓
Heptachlor Epoxide					✓	✓	✓		✓
Lindane (hexachlorocyclohexane)					✓	✓	✓		✓
DDT, DDD, DDE					✓	✓	✓		✓
Toxaphene					✓	✓	✓		✓
Dieldrin					✓	✓	✓		✓
2,4-D					✓	✓	✓		✓
2,4,5-T					✓	✓	✓		✓
Endrin					✓	✓	✓		✓
Energetics									
TNT	✓	✓	✓		✓	✓	✓		✓
DNT	✓	✓	✓		✓	✓	✓		✓
Nitroglycerine	✓	✓	✓		✓	✓	✓		✓
HMX	✓	✓	✓		✓	✓	✓		✓
RDX	✓	✓	✓		✓	✓	✓		✓
Miscellaneous									
Acetone	✓	✓	✓	✓	✓	✓	✓		
4-methyl-2-pentanone	✓	✓	✓	✓					
Perchlorate					✓	✓	✓		✓
Polychlorinated biphenyls (PCBs)									
Nitrates					✓	✓	✓		✓
Carbon Disulfide (CS2)	✓	✓	✓		✓	✓	✓		
1,4-dioxane			✓		✓	✓	✓		
Heavy Metals									
Chromium (VI)					✓	✓	✓		✓

For additional information or a free application design and cost estimate call 1-949-366-8000 or visit www.regenesis.com

PersulfOx™

PersulfOx™
CATALYZED PERSULFATE

A Sodium Persulfate - Based *In Situ* Chemical Oxidant with Built-In Activation

DESCRIPTION

PersulfOx™ is an *in situ* chemical oxidation reagent that destroys organic contaminants found in groundwater and soil through powerful yet controlled chemical reactions. PersulfOx is a sodium persulfate ($Na_2S_2O_8$) - based technology which employs a uniquely patented catalyst to enhance oxidative destruction of both hydrocarbon and chlorinated contaminants in the subsurface.

Traditionally, sodium persulfate is activated with the addition of heat, chelated metals, hydrogen peroxide, or base in order to generate sulfate radicals. These activation processes are inherently complex, costly and can pose additional health and safety risks. In comparison, PersulfOx is a relatively safe and easy-to-use ISCO agent.

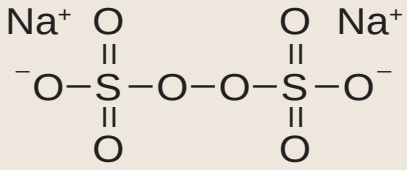


FIGURE 1:
SODIUM PERSULFATE CHEMICAL STRUCTURE

In short, PersulfOx contains a built-in catalyst which activates the persulfate component and generates contaminant destroying free radicals without the need for the addition of a separate activator.

FEATURES & BENEFITS

- Promotes rapid and sustained *in situ* oxidation of a wide-range of organic contaminants
- Provides a unique catalytic surface on which oxidants and contaminants react in a process known as "surface mediated oxidation."
- Contains built-in activation: eliminates complex and potentially hazardous chemical addition required to achieve traditional persulfate activation
- Fewer health and safety concerns than with use of traditional activation methods such as heat, chelated metals, hydrogen peroxide or base
- Single component product results in simplified logistics and application. No additional containers and/or multi-step mixing ratios required prior to application
- Contaminant oxidation performance equivalent to best alternative persulfate activation methods

FUNCTION

PersulfOx is an all-in-one product that provides powerful and highly efficient chemical oxidation performance. It is easily mixed with water and applied into the contaminated matrix using subsurface injection techniques or soil mixing tools.

The PersulfOx catalyst is a silica based, microscopic surface on which oxidants and contaminants can come together and react in a distinct process known as "surface mediated oxidation." During this process, oxidation reactions occur repeatedly on the surface of the catalyst serving several contaminant-reducing functions:

- The generation of sulfate radical and other oxidizing species
- Accelerated oxidation through the adsorption of contaminant molecules and other oxidizing species
- Catalyzes direct and free-radical-mediated oxidation by sodium persulfate

The equation below shows the net complete oxidation of toluene, a constituent of gasoline, by PersulfOx:

For a Free Consultation and Application Design for the use of PersulfOx visit www.regenesis.com

REGENESIS
Advanced Technologies for Contaminated Site Remediation

REGENESIS / 1011 Calle Sombra / San Clemente / CA 92673-6244 / USA / T: 949.366.8000 / F: 949.366.8090 / www.regenesis.com

PersulfOx

Material Safety Data Sheet (MSDS)

Last Revised: February 8, 2013

Section 1 – Supplier Information and Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Synonyms:	A mixture of Sodium Persulfate [$Na_2S_2O_8$] and Sodium Silicate [Na_2SiO_3].
Chemical Family:	Inorganic Chemicals
Trade Name:	PersulfOx™
Product Use:	Used to remediate contaminated soil and groundwater (environmental remediation applications)

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical	Percentage
7775-27-1	Sodium Persulfate	90%
1344-09-8	Sodium Silicate	10%

Section 3 – Physical Data	
Form:	Solid, free-flowing powder
Color:	White
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA
Flammability/Flash Point:	Non-combustible
Vapor Pressure:	NA
Bulk Density:	NA
Viscosity:	NA
pH (10% solution):	≈ 7.0 – 11.5 @ 25 °C
Decomposition Temperature:	Decomposition will occur upon heating.

Section 4 – Reactivity Data	
Stability:	Stable under normal conditions. Stability decreases in the presence of heat, moisture and/or contamination.
Conditions to Avoid/Incompatibility:	Acids, alkalis, halides (fluorides, chlorides, bromides and iodides), Combustible materials, most metals and heavy metals, oxidizable materials, other oxidizers, reducing agents, cleaners, and organic or carbon containing compounds, moisture, heat, flame. Contact with incompatible materials can result in a material decomposition or other uncontrolled reactions.
Hazardous Decomposition Products:	Oxygen that supports combustion and oxides of sulfur.
Polymerization	Will not occur

Section 5 – Regulations

UNITED STATES

SARA TITLE III (SUPERFUND ADMENDMENTS AND REAUTHORIZATION ACT)

Section 302 Extremely Hazardous Substances (40 CFR 335, Appendix A):	N/A
Section 311 Hazard Categories (40 CFR 370):	Fire Hazard, Immediate (Acute) Health Hazard
Section 312 Threshold Planning Quantity (40 CFR 370):	The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.: None
Section 313 Reportable Ingredients (40 CFR 372):	Not Listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA Designation & Reportable Quantities (RQ) (40 CFR 302.4):	Unlisted, RQ = 100 lbs., Ignitability

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:

Oxidizer. Store in a cool, clean, and well ventilated area away from all sources of ignition and out of the direct sunlight. Store in a dry location away from heat and in temperatures less than 40 °C.

Keep away from incompatible materials and keep lids tightly closed. Do not store in improperly labeled containers.

Protect from moisture. Do not store near combustible materials. Keep containers well sealed.

Store separately from reducing materials. Avoid contamination which may lead to decomposition.

Handling:

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Wear respiratory protection if ventilation is inadequate or not available. Use eye and skin protection. Use clean plastic or stainless steel scoops only.

Do not swallow. Avoid breathing vapors, mists or dust. Do not eat, drink or smoke in the work area. Wash hands thoroughly after handling.

Label containers and keep them tightly closed when not in use.

Personal Protective Equipment (PPE)

Engineering Controls:

General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Avoid creating dust or mists. Maintain adequate ventilation at all times. Do not use in confined areas. Keep levels below recommended exposure limits. To determine actual exposure limits, monitoring should be performed on a routine basis. General use of persulfates will generate thermal and pressure regimes which need to mitigated during application as a precautionary measure.

Respiratory Protection:

Use NIOSH(P100) approved respirator when airborne dust is expected.

Exposure Limit

0.1 mg/m^3 (TWA) - ACGIH

Hand Protection:

Wear chemical resistant gloves (neoprene, rubber, or PVC). Thoroughly wash the outside of gloves with soap and water prior to removal.

Section 6 – Protective Measures, Storage and Handling (cont)

Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Chemical resistant gloves (neoprene, PVC or rubber) and protective clothing should be worn during use.
Protection Against Fire & Explosion:	Product is non-explosive. In case of fire, evacuate all non-essential personnel, wear protective clothing and a self-contained breathing apparatus, stay upwind of fire, and use water to spray cool fire-exposed containers. Presence of water accelerates decomposition.

Section 7 – Hazards Identification

Potential Health Effects

Inhalation:	May be harmful and irritating.
Eye Contact:	Non-irritating (rabbit)
Skin Contact:	Non-irritating (rabbit)
Ingestion:	May be harmful if swallowed (vomiting and diarrhea).
Target Organs:	Eyes, skin, respiratory passages

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage:	Spilled material should be collected and put in approved DOT container and isolated for disposal. Isolated material should be monitored for signs of decomposition (fuming/smoking). If spilled material is wet, dissolve with large quantity of water and dispose as a hazardous waste. All disposals should be carried out according to regulatory agencies procedures.
Extinguishing Media:	Water; Do not use carbon dioxide or other gas filled fire extinguishers; they will have no effect on decomposing persulfates. Wear full protective clothing and self contained breathing apparatus.

First Aid

Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Seek medical attention if the effects persist.
Ingestion:	Rinse mouth with water, give two-four cups of water to dilute the chemical and seek medical attention immediately. Never give anything by mouth to an unconscious person. **Do Not** induce vomiting.
Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water. Seek medical attention if irritation occurs or persists.

Notes to Medical Doctor: This product has low oral toxicity and is not irritating to the eyes and skin. Flooding of exposed areas with water is suggested, but gastric lavage or emesis induction for ingestions must consider possible aggravation of esophageal injury and the expected absence of system effects. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

Section 9 – Accidental Release Measures

Precautions:

Cleanup Methods: Spilled material should be collected and put in approved DOT container and isolated for disposal. Isolated material should be monitored for signs of decomposition (fuming/smoking). If spilled material is wet, dissolve with large quantity of water and dispose as a hazardous waste. All disposals should be carried out according to local regulatory agencies procedures.

Section 10 – Information on Toxicology

Toxicity Data

Oral LD_{50} (rat):	895 mg/kg
Dermal LD_{50} (rabbit):	> 10 g/kg
Inhalation LD_{50} (rat):	5.1 mg/kg

Section 11 – Information on Ecology

Ecotoxicological Information

Bluegill sunfish, 96-hour LC_{50} = 771 mg/L

Rainbow trout, 96-hour LC_{50} = 163 mg/L

Daphnia, 48-hour LC_{50} = 133 mg/L

Grass shrimp, 96-hour LC_{50} = 519 mg/L

Biotic Degradation: N/A.

Section 12 – Disposal Considerations

Waste Disposal Method: Dispose of in an approved waste facility operated by an authorized contactor in compliance with local, state and federal regulations.

Section 13 – Shipping/Transport Information

D.O.T. Shipping Name:	Oxidizing Solid, n.o.s. (a mixture of Sodium persulfate, sodium metasilicate and silicon dioxide)
UN Number:	UN 1479
Hazard Class:	5.1 (Oxidizer)
Labels:	5.1 (Oxidizer)
Packaging Group:	III

Section 14 – Other Information

HMIS® Rating	Health – 1 (Slight)	Physical Hazard – 1 (Slight)
	Flammability – 0 (None)	Lab PPE – goggles, gloves, apron, dust respirator

HMIS® is a registered trademark of the National Painting and Coating Association.

NFPA	Health – 1 (Slight)	Reactivity – 1 (Slight)
	Flammability – 0 (None)	Special - Oxidizer

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Geosynthetic Clay Liner

BENTOFIX® NSL

NSL

Thermal Lock® Geosynthetic Clay Liners

Bentofix Thermal Lock® NSL Geosynthetic Clay Liner (GCL) is a needlepunched, thermally reinforced composite comprised of a core of natural sodium Wyoming bentonite clay between two durable geotextile layers to form a low permeability hydraulic barrier. The top layer is a staple fiber nonwoven (NW) geotextile while the bottom layer is a woven (W) geotextile. The product is intended for moderate to steep slopes and moderate to high load applications where increased internal shear strength is required.

Property	ASTM Test Method	Frequency	Value Imperial Units	Value Metric Units
Typical Geotextile Properties				
• Top / Cap Nonwoven	D 5261	200,000 sq ft (20,000 m^2)	6.0 oz./yd^2 MARV	200 g / m^2 MARV(1)
• Woven			3.1 oz./yd^2 MARV	105 g / m^2 MARV
Bentonite Properties (SI Units Only)				
• Swell Index	D 5890	100,000 lbs.	24 ml/ 2 g min	24 ml/ 2 g min
• Moisture Content	D 4643	(50,000 kg)	12 % max	12 % max
• Fluid Loss	D 5891	100,000 lbs.	18 ml max	18 ml max
• Smectite (Montmorillonite)	XRD		90% min.	90% min.
Finished GCL Properties				
• Bentonite Mass/Unit Area[2]	D 5993	40,000 ft^2 (4,000 m^2)	0.75 lbs/ft^2 MARV	3.66 kg/m^2 MARV
• Tensile Strength[3]	D 6768	40,000 ft^2 (4,000 m^2)	30 lb/in MARV	5 kN/m MARV
• Peel Strength	D 6496	40,000 ft^2 (4,000 m^2)	3.5 lbs/in min	610 N/m min
• Permeability[4]	D 5887	Weekly	5 x 10^{-9} cm/s max	5 x 10^{-9} cm/s max
• Index Flux[4]	D 5887	Weekly	1 x 10^{-8} $m^3/m^2/s$ max	1 x 10^{-8} $m^3/m^2/s$ max
• Internal Shear Strength[5]	D 6243	Periodic	500 psf Typical	24 kPa Typical

(1) Minimim Average Roll Value.
(2) Oven-dried measurement. Equates to 0.84 lb/sqft (4.1 kg/m^2) when indexed to 12% moisture content.
(3) Tested in machine direction.
(4) Deaired, deionized water @ 5 psi (34.5 kPa) maximum effective confining stress and 2 psi (13.8 kPa) head pressure.
(5) Typical peak value for specimen hydrated for 24 hours and sheared under a 200 psf (9.6 kPa) normal stress.

- - Roll width and lengths have a tolerance of +/- 1%. Standard rolls are 4.72m x 45.72m (15.5 feet by 150 feet). Rolls can be made longer if required and/or specified, however require advance notice.
- - Packaged weight of standard rolls is listed at 2,600 lbs – 1179 kg.

PRODUCT DATA SHEET

GSE BentoLiner CNSL Geosynthetic Clay Liner

GSE BentoLiner "CNSL" is a needle-punched reinforced composite geosynthetic clay liner (GCL) comprised of a uniform layer of granular sodium bentonite encapsulated between a woven and a nonwoven geotextile with a uniform polypropylene geofilm coating applied to the woven surface to lower the hydraulic conductivity. The product is intended for applications that require excellent hydraulic conductivity properties and/or bentonite protection for moderate to steep slopes and moderate to high load applications where increased internal shear strength is required.

[*]

AT THE CORE:

This composite clay liner is intended for applications that require excellent hydraulic conductivity properties and/or the self-seaming characteristics of bentonite clay.

Product Specifications

Tested Property	Test Method	Frequency	VALUE
Geotextile Property			
Cap Nonwoven, Mass/Unit Area	ASTM D 5261	1/200,000 ft²	6.0 oz/yd² MARV(1)
Carrier Woven, Mass/Unit Area	ASTM D 5261	1/200,000 ft²	3.1 oz/yd² MARV
Bentonite Property			
Swell Index	ASTM D 5890	1/100,000 lb	24 ml/2 g min
Moisture Content	ASTM D 4643	1/100,000 lb	12% max
Fluid Loss	ASTM D 5891	1/100,000 lb	18 ml max
Finished GCL Property			
Bentonite, Mass/Unit Area(2)	ASTM D 5993	1/40,000 ft²	0.75 lb/ft² MARV
Tensile Strength(3)	ASTM D 6768	1/40,000 ft²	40 lb/in MARV
Peel Strength	ASTM D 6496 ASTM D 4632(4)	1/40,000 ft²	3.5 lb/in MARV 21 lb MARV
Hydraulic Conductivity(5)	ASTM D 5887	Periodically	5 x 10^{-10} cm/sec max
Index Flux(5)	ASTM D 5887	Periodically	1 x 10^{-9} m³/m²/sec max
Internal Shear Strength(6)	ASTM D 6243	Periodically	500 psf Typical
TYPICAL ROLL DIMENSIONS			
Width x Length(7)	Typical	Every Roll	15.5 ft x 150 ft
Area per Roll	Typical	Every Roll	2,325 ft²
Packaged Weight	Typical	Every Roll	2,600 lb

NOTES:

- (1)Minimum Average Roll Value.
- (2)At 0% moisture content.
- (3)Tested in machine direction.
- (4)Modified ASTM D 4632 to use a 4 in wide grip. The maximum peak of five specimens averaged in machine direction.
- (5)Deaired, deionized water @ 5 psi maximum effective confining stress and 2 psi head pressure. Hydraulic Conductivity and Index Flux are performed only on a periodic basis because the polypropylene coating is essentialy impermeable.
- (6)Typical peak value for specimen hydrated for 24 hours and sheared under a 200 psf normal stress.
- (7)Roll widths and lengths have a tolerance of ±1%.

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

GSE ENVIRONMENTAL™

[DURABILITY RUNS DEEP]

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.

Appendix C

Laboratory Report

Pace Analytical e-Report

***Issuance of this report is prior to full data package.**

Report prepared for:
BARTON AND LOGUIDICE
10 AIRLINE DRIVE
ALBANY, NY 12205
CONTACT: ANDY BARBER

Project ID: ALCO
Sampling Date(s): August 11, 2016
Lab Report ID: 16080332
Client Service Contact: Nick Nicholas (518) 346-4592

Analysis Included:
VOCs E8260C - Sub Pace LI
TPH-DRO E8015 - Sub Pace LI

Roy Smith
Technical Director

Certifications: New York (EPA: NY00906, ELAP: 11078), New Jersey (NY026), Connecticut (PH-0337), Massachusetts (M-NY906), Virginia (460241)

Pace Analytical Services, Inc. | 2190 Technology Drive | Schenectady, NY 12308
Phone: 518.346.4592 | internet: www.pacelabs.com

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Table of Contents

QUALIFIERS

Definitions

B - Denotes analyte observed in associated method blank or extraction blank. Analyte concentration should be considered as estimated.

D - Surrogate was diluted. The analysis of the sample required a dilution such that the surrogate concentration was diluted outside the laboratory acceptance criteria.

E - Denotes analyte concentration exceeded calibration range of instrument. Sample could not be reanalyzed at secondary dilution due to insufficient sample amount, quick turn-around request, sample matrix interference or hold time excursion. Concentration result should be considered as estimated.

J - Denotes an estimated concentration. The concentration result is greater than or equal to the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

MDL – Adjusted Method Detection Limit.

P - Indicates relative percent difference (RPD) between primary and secondary gas chromatograph (GC) column analysis exceeds 40 % or indicates percent difference (PD) between primary and secondary gas chromatograph (GC) column analysis exceeds 25 %.

PQL – Practical Quantitation Limit. PQLs are adjusted for sample weight/volume and dilution factors.

RL - Reporting Limit Denotes lowest analyte concentration reportable for the sample based on regulatory or project specific limits.

U - Denotes analyte not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.

Z - Chromatographic interference due to polychlorinated biphenyl (PCB) co-elution.

* - Value not within control limits.

SAMPLE CHAIN OF CUSTODY

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<16080332P1>

160803321

of 2

1082317

Section A Required Client Information:

Company: B&L
Address: 10 AIRLINE DRIVE SUITE 200
ALBANY NY 12205
Email To: rmccormick@bartonandloguidice.com
Phone: (518)218-1801 Fax: (518)219-1805
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: ANDY BARBER
Copy To: NATHAN SHAFFER
ROSEMARY MCCORMICK
Purchase Order No.:
Project Name: ALCO
Project Number: 1368.001.001

Section C Invoice Information:

Attention: ACCOUNTS PAYABLE
Company Name: B&L
Address: 443 ELECTRONICS PKWY LIVERPOOL
Pace Quote Reference:
Pace Project Manager: NICHOLAS NICHOLAS
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER NYSDEC

Site Location STATE: NY

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: VOCs by 8260	DRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BPB-01	SL	G			8/11/16	9:50		2	X								Y	X	X		AT21303
2	BPR-01	SL	G				10:05		6	X								Y	X	X		AT21304
3	BPR-02	SL	G				10:10		2	X								Y	X	X		AT21305
4	BPB-03	SL	G				10:30		2	X								Y	X	X		AT21306
5	BPB-03	SL	G				10:50		2	X								Y	X	X		AT21307
6	BPB-04	SL	G				11:15		2	X								Y	X	X		AT21308
7	BPB-05	SL	G				11:50		2	X								Y	X	X		AT21309
8	BPB-06	SL	G				12:40		2	X								Y	X	X		AT21310
9	BPR-07	SL	G				13:25		2	X								Y	X	X		AT21311
10	BPB-08	SL	G				14:30		2	X								Y	X	X		AT21312
11	BPB-09	SL	G			↓	15:20		2	X								Y	X	X		AT21313
12	BPP-10	SL	G			8/11/16	15:50		2	X								Y	X	X		AT21314

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Cat. B deliverables.	[signature]/B&L	8/12/16	10:40	[signature]	8/12/16	19:40

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.0	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ROSEMARY MCCORMICK
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 8/11/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<16080332P2>

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of 2

1882324

Section A
Required Client Information:

Company: B+L
Address: 11 AIRLINE DRIVE SUITE 200
ALBANY NY 12205
Email To: rmccormick@bartonandloguidice.com
Phone: (518)218-7801 Fax: (518)218-7805
Requested Due Date/TAT: STANDARD

Section B
Required Project Information:

Report To: ANDY BARBER
Copy To: NATHAN SHAFFER
Purchase Order No.:
Project Name: ALCO
Project Number: 13168.001.001

Section C
Invoice Information:

Attention: ACCOUNTS PAYABLE
Company Name: B+L
Address: 443 ELECTRONICS PKWY LIVERPOOL
Pace Quote Reference:
Pace Project Manager: NICHOLAS NICHOLAS
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER NYSDEC

Site Location STATE: NY

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: VOCs by 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DUP-X	SL	G			8/11/16	—	4°	2	X								X		AT21315
2																		X		
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / B+L	8/12/16	10:40	[signature]	8/12/16	10:40	2.0	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ROSEMARY MCCORMICK

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/11/16

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

<16080332P3>

Sample Condition Upon Receipt

CLIENT NAME: B+L

PROJECT : ALCO

COURIER: FedEx ☐ UPS ☐ Client ☒ Pace ☐ Other ☐

TRACKING # N/A

CUSTODY SEAL PRESENT: Yes ☐ No ☒ INTACT: Yes ☐ No ☐ N/A ☒

PACKING MATERIAL: Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other ☐ ICE USED: Wet ☒ Blue ☐ None ☐

THERMOMETER USED: #164 ☒ IR Gun 03 ☐ #160239773 ☐ #160239773-PRB ☐ COOLER TEMPERATURE (°C): 2.0

BIOLOGICAL TISSUE IS FROZEN: Yes ☐ No ☐ N/A ☒

COMMENTS:

Temperature is Acceptable? ☒Yes ☐No

Chain of Custody Present:	☒Yes	☐No		1.
Chain of Custody Filled Out:	☒Yes	☐No		2.
Chain of Custody Relinquished:	☒Yes	☐No		3.
Sampler Name / Signature on COC:	☒Yes	☐No		4.
Samples Arrived within Hold Time:	☒Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☒No		6.
Rush Turn Around Time Requested:	☐Yes	☒No		7.
Sufficient Volume:	☒Yes	☐No		8.
Correct Containers Used:	☒Yes	☐No		9.
- Pace Containers Used:	☒Yes	☐No		
Containers Intact:	☒Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC: - Includes date/time/ID/Analysis	☐Yes	☒No		12. Sample ID's abbreviated on COC. No MS/MSD indicated on COC, we recieved MS/MSD for sample ID BFB-01.
All containers needing preservation have been checked:	☐Yes	☐No	☒N/A	13.
All containers needing preservation are in compliance with EPA recommendation: - Exceptions that are not checked: TOC, VOA, Subcontract Analyses	☐Yes	☐No	☒N/A	Initial when completed: N/A Lot # of added preservative: N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A	14.
Trip Blank Present:	☐Yes	☐No	☒N/A	15.
Trip Blank Custody Seals Present:	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot #: N/A				

Sample Receipt form filled in: Courtline

Line-Out (Includes Copying Shipping Documents and verifying sample pH): DB 8/15/16

Log In (Includes notifying PM of any discrepacies and documenting in LIMS): DB 8/16/16

Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook): DB 8/15/16

Document Control# F-NY-C-034-rev.01 (24May2016)

SAMPLE RECEIPT

SAMPLE RECEIPT REPORT
16080332

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

CLIENT: BARTON AND LOGUIDICE
PROJECT: ALCO
LRF: 16080332
REPORT: DATA PACKAGE
EDD: YES
LRF TAT: 7 DAYS

RECEIVED DATE: 8/12/2016 10:40
SHIPPED VIA: DROP OFF [1,2]
SHIPPING ID:
NUMBER OF COOLERS: 1
CUSTODY SEAL INTACT: NA
COOLER STATUS: CHILLED
TEMPERATURE(S): [5] 2.0 °C

SAMPLE SEALS INTACT: NA
SAMPLES PRESERVED PER METHOD GUIDANCE: YES
SAMPLES REC'D IN HOLDTIME: [3] YES
DISPOSAL: BY LAB (45 DAYS)
COC DISCREPANCY: YES

COMMENTS:
SAMPLE IDS ABBREVIATED ON COC. MS/MSD VOLUME RECEIVED FOR SAMPLE "BPB-01;" NOT INDICATED ON COC.

3

CLIENT ID (LAB ID)	TAT-DUE Date [4]	DATE-TIME SAMPLED	MATRIX	METHOD	TEST DESCRIPTION	QC REQUEST
BPB-01 (AT21303)	7 DAYS 08-23-16	8/11/2016 09:50	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 09:50	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-01 (AT21304)	7 DAYS 08-23-16	8/11/2016 10:05	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 10:05	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	MS, MSD
BPB-02 (AT21305)	7 DAYS 08-23-16	8/11/2016 10:10	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 10:10	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-03 (AT21306)	7 DAYS 08-23-16	8/11/2016 10:30	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 10:30	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-03 (AT21307)	7 DAYS 08-23-16	8/11/2016 10:50	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 10:50	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-04 (AT21308)	7 DAYS 08-23-16	8/11/2016 11:15	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 11:15	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-05 (AT21309)	7 DAYS 08-23-16	8/11/2016 11:50	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 11:50	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-06 (AT21310)	7 DAYS 08-23-16	8/11/2016 12:40	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 12:40	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-07 (AT21311)	7 DAYS 08-23-16	8/11/2016 13:25	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 13:25	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-08 (AT21312)	7 DAYS 08-23-16	8/11/2016 14:30	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 14:30	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-09 (AT21313)	7 DAYS 08-23-16	8/11/2016 15:20	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 15:20	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
BPB-10 (AT21314)	7 DAYS 08-23-16	8/11/2016 15:50	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016 15:50	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	
DUP-X (AT21315)	7 DAYS 08-23-16	8/11/2016	Soil	TPH-DRO E8015	TPH-DRO E8015 - Sub Pace LI	
	7 DAYS 08-23-16	8/11/2016	Soil	VOCs E8260C	VOCs E8260C - Sub Pace LI	

[1] The pH preservation check of Oil and Grease (Method 1664) and Total Organic Carbon (Method 5310B) are performed as soon as possible after sample receipt and may not be included in this report.
[2] The pH preservation check of aqueous volatile samples is not performed until after the analysis of the sample to maintain zero headspace and is not included in this report.
[3] Samples received for pH analysis are not marked as a hold time exceedance here. SW-846 methods suggests analysis to be done within 15 minutes of sample collection. Because of transportation time it is not possible for the laboratory to perform the test in that time. Sample Certificates of Analysis reports are noted as such.
[4] Samples arriving at the laboratory after 4:00 pm are assigned a due date as if they arrived the following business day unless other arrangements have been made.
The due date represents the date the lab report is expected to be completed on or before 5:00 pm (EST) for the date specified.
[5] All samples which require thermal preservation shall be considered acceptable when received greater than 6 degrees Celsius if they are collected on the same day as received and there is evidence that the chilling process has begun, such as arrival on ice.Control limits are between 0-6 Degrees Celsius. Control limits do not apply for metals analysis.
[6] Samples requesting analysis for Orthophosphate (SM 4500-P E-99,-11) require the samples to be filtered in the field within 15 minutes of the sampling event. Samples that are received unfiltered will be noted as not method compliant on the Certificates of Analysis.

Reporting Parameters and Lists

Subcontract Analysis

PACE ANALYTICAL
575 Broad Hollow Road
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.pacelabs.com

Case Narrative

WO#: **1608G07**

Date:

CLIENT: Pace Analytical Services Inc.
Project: 16080332 - 1368.001

5035A sampling method for VOCs not followed. Sample received in 4 oz jar.

4

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

Results are only for the samples and analytes requested.

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the tests requested.

Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 9:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21303
Collected By CLIENT

Lab No. : 1608G07-001
Client Sample ID: BPB-01

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	280		1	mg/Kg-dry			08/20/2016 7:34 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	48.4		1	%Rec	Limit	16-113	08/20/2016 7:34 PM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 9:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21303
Collected By CLIENT

Lab No. : 1608G07-001
Client Sample ID: BPB-01

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,1,1-Trichloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,1,2-Trichloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,1-Dichloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,1-Dichloroethene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,1-Dichloropropene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2,3-Trichlorobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2,3-Trichloropropane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2,4-Trichlorobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2,4-Trimethylbenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2-Dibromoethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2-Dichlorobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2-Dichloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,2-Dichloropropane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,3-Dichlorobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,3-Dichloropropane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
1,4-Dichlorobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
2,2-Dichloropropane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
2-Butanone	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
2-Chloroethylvinyl ether	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
2-Hexanone	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
4-Isopropyltoluene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
4-Methyl-2-pentanone	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Acetone	< 750	Dc	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Benzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01

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S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308

Attn To : Nicholas Nicholas

Collected : 8/11/2016 9:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21303
Collected By CLIENT

Lab No. : 1608G07-001
Client Sample ID: BPB-01

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Bromochloromethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Bromodichloromethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Bromoform	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Bromomethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Carbon disulfide	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Carbon tetrachloride	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Chlorobenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Chloroethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Chloroform	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Chloromethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
cis-1,2-Dichloroethene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
cis-1,3-Dichloropropene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Dibromochloromethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Dibromomethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Dichlorodifluoromethane	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Ethylbenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Hexachlorobutadiene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Isopropylbenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
m,p-Xylene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Methyl tert-butyl ether	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Methylene chloride	< 750	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Naphthalene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
n-Butylbenzene	150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
n-Propylbenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
o-Xylene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
sec-Butylbenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Styrene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
tert-Butylbenzene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01
Tetrachloroethene	< 150	D	60	µg/Kg-dry	08/19/2016 10:03 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 9:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21303
Collected By CLIENT

Lab No. : 1608G07-001
Client Sample ID: BPB-01

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	220	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
trans-1,2-Dichloroethene	< 150	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
trans-1,3-Dichloropropene	< 150	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
Trichloroethene	< 150	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
Trichlorofluoromethane	< 150	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
Vinyl acetate	< 150	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
Vinyl chloride	< 150	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
Xylene (total)	170	D	60	µg/Kg-dry			08/19/2016 10:03 AM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	87.8	D	60	%Rec	Limit	33-145	08/19/2016 10:03 AM	Container-01 of 01
Surr: 4-Bromofluorobenzene	92.6	D	60	%Rec	Limit	60-148	08/19/2016 10:03 AM	Container-01 of 01
Surr: Toluene-d8	78.1	D	60	%Rec	Limit	60-132	08/19/2016 10:03 AM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	20.0		1	wt%	08/19/2016 3:38 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
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c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:05:00 AM
Received : 8/17/2016 9:45:00 AM AT21304
Collected By CLIENT

Lab No. : 1608G07-002
Client Sample ID: BPB-01

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	< 9.1		1	mg/Kg-dry			08/20/2016 8:13 PM	Container-01 of 03
Surr: 1,4-Dichlorobenzene-d4	49.2		1	%Rec	Limit	16-113	08/20/2016 8:13 PM	Container-01 of 03

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
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Date Reported :

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LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:05:00 AM
Received : 8/17/2016 9:45:00 AM AT21304
Collected By CLIENT

Lab No. : 1608G07-002
Client Sample ID: BPB-01

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,1,1-Trichloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,1,2-Trichloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,1-Dichloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,1-Dichloroethene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,1-Dichloropropene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2,3-Trichloropropane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2,4-Trimethylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2-Dibromoethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2-Dichlorobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2-Dichloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,2-Dichloropropane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,3-Dichlorobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,3-Dichloropropane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
1,4-Dichlorobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
2,2-Dichloropropane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
2-Butanone	44	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
2-Hexanone	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
4-Isopropyltoluene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
4-Methyl-2-pentanone	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Acetone	160	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Benzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.
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S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:05:00 AM
Received : 8/17/2016 9:45:00 AM AT21304
Collected By CLIENT

Lab No. : 1608G07-002
Client Sample ID: BPB-01

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Bromochloromethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Bromodichloromethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Bromoform	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Bromomethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Carbon disulfide	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Carbon tetrachloride	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Chlorobenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Chloroethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Chloroform	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Chloromethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Dibromochloromethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Dibromomethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Dichlorodifluoromethane	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Ethylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Hexachlorobutadiene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Isopropylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
m,p-Xylene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Methyl tert-butyl ether	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Methylene chloride	< 68	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Naphthalene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
n-Butylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
n-Propylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
o-Xylene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
sec-Butylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Styrene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
tert-Butylbenzene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03
Tetrachloroethene	< 14	D	5	µg/Kg-dry	08/18/2016 8:59 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.
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r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Pace Analytical
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NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:05:00 AM
Received : 8/17/2016 9:45:00 AM AT21304
Collected By CLIENT

Lab No. : 1608G07-002
Client Sample ID: BPB-01

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
Trichloroethene	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
Trichlorofluoromethane	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
Vinyl acetate	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
Vinyl chloride	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
Xylene (total)	< 14	D	5	µg/Kg-dry			08/18/2016 8:59 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	106	D	5	%Rec	Limit	33-145	08/18/2016 8:59 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	99.2	D	5	%Rec	Limit	60-148	08/18/2016 8:59 PM	Container-01 of 03
Surr: Toluene-d8	101	D	5	%Rec	Limit	60-132	08/18/2016 8:59 PM	Container-01 of 03

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	26.6		1	wt%	08/19/2016 3:42 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:10:00 AM
Received : 8/17/2016 9:45:00 AM AT21305
Collected By CLIENT

Lab No. : 1608G07-003
Client Sample ID: BPB-02

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	420		1	mg/Kg-dry			08/20/2016 10:11 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	49.9		1	%Rec	Limit	16-113	08/20/2016 10:11 PM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
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Date Reported :

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308

Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:10:00 AM
Received : 8/17/2016 9:45:00 AM AT21305
Collected By CLIENT

Lab No. : 1608G07-003
Client Sample ID: BPB-02

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,1,1-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,1,2-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,1-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,1-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,1-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2,3-Trichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2-Dibromoethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,3-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,3-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
1,4-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
2,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
2-Butanone	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
2-Hexanone	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
4-Isopropyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
4-Methyl-2-pentanone	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Acetone	< 65	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Benzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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4

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NYSDOH ID#10478 www.pacelabs.com

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308

Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:10:00 AM
Received : 8/17/2016 9:45:00 AM AT21305
Collected By CLIENT

Lab No. : 1608G07-003
Client Sample ID: BPB-02

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Bromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Bromodichloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Bromoform	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Bromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Carbon disulfide	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Carbon tetrachloride	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Chlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Chloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Chloroform	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Chloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Dibromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Dibromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Dichlorodifluoromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Ethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Hexachlorobutadiene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Isopropylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
m,p-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Methyl tert-butyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Methylene chloride	< 65	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Naphthalene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
n-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
n-Propylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
o-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
sec-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Styrene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
tert-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01
Tetrachloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 10:27 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
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Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Date Reported :

4

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:10:00 AM
Received : 8/17/2016 9:45:00 AM AT21305
Collected By CLIENT

Lab No. : 1608G07-003
Client Sample ID: BPB-02

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
Trichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
Trichlorofluoromethane	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
Vinyl acetate	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
Vinyl chloride	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
Xylene (total)	< 13	D	5	µg/Kg-dry			08/18/2016 10:27 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	112	D	5	%Rec	Limit	33-145	08/18/2016 10:27 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	96.6	D	5	%Rec	Limit	60-148	08/18/2016 10:27 PM	Container-01 of 01
Surr: Toluene-d8	104	D	5	%Rec	Limit	60-132	08/18/2016 10:27 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	23.3		1	wt%	08/19/2016 3:42 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

Results are only for the samples and analytes requested.

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the tests requested.

Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:30:00 AM
Received : 8/17/2016 9:45:00 AM AT21306
Collected By CLIENT

Lab No. : 1608G07-004
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	710	D	10	mg/Kg-dry			08/22/2016 5:28 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	88.6		1	%Rec	Limit	16-113	08/20/2016 10:51 PM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
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M-, M+ = Matrix Spike recovery below / above control limit
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Date Reported :

Caitlin Panzarella
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Attn To : Nicholas Nicholas
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Received : 8/17/2016 9:45:00 AM AT21306
Collected By CLIENT

Lab No. : 1608G07-004
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,1,1-Trichloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,1,2-Trichloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,1-Dichloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,1-Dichloroethene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,1-Dichloropropene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2,3-Trichlorobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2,3-Trichloropropane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2,4-Trichlorobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2,4-Trimethylbenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2-Dibromoethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2-Dichlorobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2-Dichloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,2-Dichloropropane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,3-Dichlorobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,3-Dichloropropane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
1,4-Dichlorobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
2,2-Dichloropropane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
2-Butanone	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
2-Chloroethylvinyl ether	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
2-Hexanone	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
4-Isopropyltoluene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
4-Methyl-2-pentanone	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Acetone	< 700	Dc	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Benzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
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Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:30:00 AM
Received : 8/17/2016 9:45:00 AM AT21306
Collected By CLIENT

Lab No. : 1608G07-004
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Bromochloromethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Bromodichloromethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Bromoform	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Bromomethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Carbon disulfide	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Carbon tetrachloride	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Chlorobenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Chloroethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Chloroform	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Chloromethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
cis-1,2-Dichloroethene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
cis-1,3-Dichloropropene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Dibromochloromethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Dibromomethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Dichlorodifluoromethane	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Ethylbenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Hexachlorobutadiene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Isopropylbenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
m,p-Xylene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Methyl tert-butyl ether	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Methylene chloride	< 700	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Naphthalene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
n-Butylbenzene	620	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
n-Propylbenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
o-Xylene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
sec-Butylbenzene	230	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Styrene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
tert-Butylbenzene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01
Tetrachloroethene	< 140	D	58.3	µg/Kg-dry	08/19/2016 10:26 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
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Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308

Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:30:00 AM
Received : 8/17/2016 9:45:00 AM AT21306
Collected By CLIENT

Lab No. : 1608G07-004
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
trans-1,2-Dichloroethene	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
trans-1,3-Dichloropropene	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
Trichloroethene	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
Trichlorofluoromethane	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
Vinyl acetate	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
Vinyl chloride	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
Xylene (total)	< 140	D	58.3	µg/Kg-dry			08/19/2016 10:26 AM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	88.4	D	58.3	%Rec	Limit	33-145	08/19/2016 10:26 AM	Container-01 of 01
Surr: 4-Bromofluorobenzene	92.7	D	58.3	%Rec	Limit	60-148	08/19/2016 10:26 AM	Container-01 of 01
Surr: Toluene-d8	77.7	D	58.3	%Rec	Limit	60-132	08/19/2016 10:26 AM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	16.6		1	wt%	08/19/2016 3:43 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
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c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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NYSDOH ID#10478 www.pacelabs.com

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21307
Collected By CLIENT

Lab No. : 1608G07-005
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	9,500	D	25	mg/Kg-dry			08/22/2016 6:07 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	286	S	1	%Rec	Limit	16-113	08/20/2016 11:30 PM	Container-01 of 01

NOTES:
Surrogate recovery high due to unresolved interferences.
C10-C28 quantified with Diesel Fuel #2.

4

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D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
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P = Duplicate RPD outside of control limit
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2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21307
Collected By CLIENT

Lab No. : 1608G07-005
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,1,1-Trichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,1,2-Trichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,1-Dichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,1-Dichloroethene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,1-Dichloropropene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2,3-Trichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2,3-Trichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2,4-Trichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2,4-Trimethylbenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2-Dibromoethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2-Dichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2-Dichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,2-Dichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,3-Dichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,3-Dichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
1,4-Dichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
2,2-Dichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
2-Butanone	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
2-Chloroethylvinyl ether	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
2-Hexanone	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
4-Isopropyltoluene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
4-Methyl-2-pentanone	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Acetone	< 800	Dc	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Benzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
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Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Date Reported :

4

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NYSDOH ID#10478 www.pacelabs.com

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 10:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21307
Collected By CLIENT

Lab No. : 1608G07-005
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Bromochloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Bromodichloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Bromoform	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Bromomethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Carbon disulfide	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Carbon tetrachloride	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Chlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Chloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Chloroform	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Chloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
cis-1,2-Dichloroethene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
cis-1,3-Dichloropropene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Dibromochloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Dibromomethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Dichlorodifluoromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Ethylbenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Hexachlorobutadiene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Isopropylbenzene	2,200	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
m,p-Xylene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Methyl tert-butyl ether	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Methylene chloride	< 800	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Naphthalene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
n-Butylbenzene	4,100	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
n-Propylbenzene	3,000	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
o-Xylene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
sec-Butylbenzene	4,500	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Styrene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
tert-Butylbenzene	300	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01
Tetrachloroethene	< 160	D	61.5	µg/Kg-dry	08/19/2016 10:48 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported :

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas

Collected : 8/11/2016 10:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21307
Collected By CLIENT

Lab No. : 1608G07-005
Client Sample ID: BPB-03

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
trans-1,2-Dichloroethene	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
trans-1,3-Dichloropropene	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
Trichloroethene	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
Trichlorofluoromethane	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
Vinyl acetate	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
Vinyl chloride	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
Xylene (total)	< 160	D	61.5	µg/Kg-dry			08/19/2016 10:48 AM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	89.4	D	61.5	%Rec	Limit	33-145	08/19/2016 10:48 AM	Container-01 of 01
Surr: 4-Bromofluorobenzene	97.3	D	61.5	%Rec	Limit	60-148	08/19/2016 10:48 AM	Container-01 of 01
Surr: Toluene-d8	59.5	DS	61.5	%Rec	Limit	60-132	08/19/2016 10:48 AM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	23.0		1	wt%	08/19/2016 3:44 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Pace Analytical
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NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 11:15:00 AM
Received : 8/17/2016 9:45:00 AM AT21308
Collected By CLIENT

Lab No. : 1608G07-006
Client Sample ID: BPB-04

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	420		1	mg/Kg-dry			08/21/2016 12:09 AM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	53.8		1	%Rec	Limit	16-113	08/21/2016 12:09 AM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
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P = Duplicate RPD outside of control limit
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S = Recovery outside of control limits for this analyte
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Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 11:15:00 AM
Received : 8/17/2016 9:45:00 AM AT21308
Collected By CLIENT

Lab No. : 1608G07-006
Client Sample ID: BPB-04

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,1,1-Trichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,1,2-Trichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,1-Dichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,1-Dichloroethene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,1-Dichloropropene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2,3-Trichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2-Dibromoethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2-Dichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2-Dichloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,2-Dichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,3-Dichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,3-Dichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
1,4-Dichlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
2,2-Dichloropropane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
2-Butanone	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
2-Hexanone	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
4-Isopropyltoluene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
4-Methyl-2-pentanone	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Acetone	< 800	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Benzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
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P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

4

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 11:15:00 AM
Received : 8/17/2016 9:45:00 AM AT21308
Collected By CLIENT

Lab No. : 1608G07-006
Client Sample ID: BPB-04

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Bromochloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Bromodichloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Bromoform	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Bromomethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Carbon disulfide	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Carbon tetrachloride	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Chlorobenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Chloroethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Chloroform	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Chloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Dibromochloromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Dibromomethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Dichlorodifluoromethane	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Ethylbenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Hexachlorobutadiene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Isopropylbenzene	300	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
m,p-Xylene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Methyl tert-butyl ether	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Methylene chloride	< 800	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Naphthalene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
n-Butylbenzene	2,400	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
n-Propylbenzene	1,000	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
o-Xylene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
sec-Butylbenzene	820	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Styrene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
tert-Butylbenzene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01
Tetrachloroethene	< 160	D	61.5	µg/Kg-dry	08/19/2016 12:16 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
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S = Recovery outside of control limits for this analyte
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Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Date Reported :

Pace Analytical
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TEL: (631) 694-3040 FAX: (631) 420-8436
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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308

Attn To : Nicholas Nicholas

Collected : 8/11/2016 11:15:00 AM
Received : 8/17/2016 9:45:00 AM AT21308
Collected By CLIENT

Lab No. : 1608G07-006
Client Sample ID: BPB-04

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
Trichloroethene	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
Trichlorofluoromethane	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
Vinyl acetate	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
Vinyl chloride	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
Xylene (total)	< 160	D	61.5	µg/Kg-dry			08/19/2016 12:16 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	87.7	D	61.5	%Rec	Limit	33-145	08/19/2016 12:16 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	87.9	D	61.5	%Rec	Limit	60-148	08/19/2016 12:16 PM	Container-01 of 01
Surr: Toluene-d8	72.5	D	61.5	%Rec	Limit	60-132	08/19/2016 12:16 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	23.0		1	wt%	08/19/2016 3:45 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 11:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21309
Collected By CLIENT

Lab No. : 1608G07-007
Client Sample ID: BPB-05

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	1,500	D	10	mg/Kg-dry			08/22/2016 6:47 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	72.3		1	%Rec	Limit	16-113	08/21/2016 2:07 AM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
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Date Reported :

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Project Manager : Caitlin Panzarella

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 11:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21309
Collected By CLIENT

Lab No. : 1608G07-007
Client Sample ID: BPB-05

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,1,1-Trichloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,1,2-Trichloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,1-Dichloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,1-Dichloroethene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,1-Dichloropropene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2,3-Trichloropropane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2-Dibromoethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2-Dichlorobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2-Dichloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,2-Dichloropropane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,3-Dichlorobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,3-Dichloropropane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
1,4-Dichlorobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
2,2-Dichloropropane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
2-Butanone	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
2-Hexanone	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
4-Isopropyltoluene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
4-Methyl-2-pentanone	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Acetone	< 720	Dc	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Benzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the tests requested.

Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 11:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21309
Collected By CLIENT

Lab No. : 1608G07-007
Client Sample ID: BPB-05

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Bromochloromethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Bromodichloromethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Bromoform	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Bromomethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Carbon disulfide	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Carbon tetrachloride	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Chlorobenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Chloroethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Chloroform	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Chloromethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Dibromochloromethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Dibromomethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Dichlorodifluoromethane	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Ethylbenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Hexachlorobutadiene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Isopropylbenzene	180	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
m,p-Xylene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Methyl tert-butyl ether	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Methylene chloride	< 720	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Naphthalene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
n-Butylbenzene	1,600	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
n-Propylbenzene	350	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
o-Xylene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
sec-Butylbenzene	630	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Styrene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
tert-Butylbenzene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01
Tetrachloroethene	< 140	D	59	µg/Kg-dry	08/19/2016 12:34 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas

Collected : 8/11/2016 11:50:00 AM
Received : 8/17/2016 9:45:00 AM AT21309
Collected By CLIENT

Lab No. : 1608G07-007
Client Sample ID: BPB-05

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
Trichloroethene	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
Trichlorofluoromethane	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
Vinyl acetate	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
Vinyl chloride	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
Xylene (total)	< 140	D	59	µg/Kg-dry			08/19/2016 12:34 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	90.4	D	59	%Rec	Limit	33-145	08/19/2016 12:34 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	98.0	D	59	%Rec	Limit	60-148	08/19/2016 12:34 PM	Container-01 of 01
Surr: Toluene-d8	72.0	D	59	%Rec	Limit	60-132	08/19/2016 12:34 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	18.2		1	wt%	08/19/2016 3:46 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas

Collected : 8/11/2016 12:40:00 PM
Received : 8/17/2016 9:45:00 AM AT21310
Collected By CLIENT

Lab No. : 1608G07-008
Client Sample ID: BPB-06

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	16,000	D	100	mg/Kg-dry			08/22/2016 7:25 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	0	S	1	%Rec	Limit	16-113	08/21/2016 2:46 AM	Container-01 of 01

NOTES:
Surrogate masked due to unresolved interferences.
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
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Collected : 8/11/2016 12:40:00 PM
Received : 8/17/2016 9:45:00 AM AT21310
Collected By CLIENT

Lab No. : 1608G07-008
Client Sample ID: BPB-06

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,1,1-Trichloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,1,2-Trichloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,1-Dichloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,1-Dichloroethene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,1-Dichloropropene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2,3-Trichloropropane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2-Dibromoethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2-Dichlorobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2-Dichloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,2-Dichloropropane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,3-Dichlorobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,3-Dichloropropane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
1,4-Dichlorobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
2,2-Dichloropropane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
2-Butanone	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
2-Hexanone	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
4-Isopropyltoluene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
4-Methyl-2-pentanone	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Acetone	< 640	Dc	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Benzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Date Reported :

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Attn To : Nicholas Nicholas
Collected : 8/11/2016 12:40:00 PM
Received : 8/17/2016 9:45:00 AM AT21310
Collected By CLIENT

Lab No. : 1608G07-008
Client Sample ID: BPB-06

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Bromochloromethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Bromodichloromethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Bromoform	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Bromomethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Carbon disulfide	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Carbon tetrachloride	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Chlorobenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Chloroethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Chloroform	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Chloromethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Dibromochloromethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Dibromomethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Dichlorodifluoromethane	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Ethylbenzene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Hexachlorobutadiene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Isopropylbenzene	4,900	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
m,p-Xylene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Methyl tert-butyl ether	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Methylene chloride	< 640	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Naphthalene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
n-Butylbenzene	5,500	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
n-Propylbenzene	2,500	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
o-Xylene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
sec-Butylbenzene	7,800	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Styrene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
tert-Butylbenzene	510	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01
Tetrachloroethene	< 130	D	56	µg/Kg-dry	08/19/2016 2:11 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Lab No. : 1608G07-008
Client Sample ID: BPB-06

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
Trichloroethene	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
Trichlorofluoromethane	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
Vinyl acetate	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
Vinyl chloride	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
Xylene (total)	< 130	D	56	µg/Kg-dry			08/19/2016 2:11 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	89.4	D	56	%Rec	Limit	33-145	08/19/2016 2:11 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	89.6	D	56	%Rec	Limit	60-148	08/19/2016 2:11 PM	Container-01 of 01
Surr: Toluene-d8	53.1	DS	56	%Rec	Limit	60-132	08/19/2016 2:11 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	11.9		1	wt%	08/19/2016 3:46 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 1:25:00 PM
Received : 8/17/2016 9:45:00 AM AT21311
Collected By CLIENT

Lab No. : 1608G07-009
Client Sample ID: BPB-07

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	6,400	D	100	mg/Kg-dry			08/22/2016 8:04 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	249	S	1	%Rec	Limit	16-113	08/21/2016 3:25 AM	Container-01 of 01

NOTES:
Surrogate recovery high due to unresolved interferences.
C10-C28 quantified with Diesel Fuel #2.

4

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B = Found in Blank
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Received : 8/17/2016 9:45:00 AM AT21311
Collected By CLIENT

Lab No. : 1608G07-009
Client Sample ID: BPB-07

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,1,1-Trichloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,1,2-Trichloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,1-Dichloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,1-Dichloroethene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,1-Dichloropropene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2,3-Trichloropropane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2-Dibromoethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2-Dichlorobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2-Dichloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,2-Dichloropropane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	200	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,3-Dichlorobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,3-Dichloropropane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
1,4-Dichlorobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
2,2-Dichloropropane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
2-Butanone	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
2-Hexanone	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
4-Isopropyltoluene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
4-Methyl-2-pentanone	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Acetone	< 780	Dc	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Benzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01

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Project Manager : Caitlin Panzarella

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Attn To : Nicholas Nicholas
Collected : 8/11/2016 1:25:00 PM
Received : 8/17/2016 9:45:00 AM AT21311
Collected By CLIENT

Lab No. : 1608G07-009
Client Sample ID: BPB-07

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Bromochloromethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Bromodichloromethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Bromoform	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Bromomethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Carbon disulfide	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Carbon tetrachloride	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Chlorobenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Chloroethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Chloroform	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Chloromethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Dibromochloromethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Dibromomethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Dichlorodifluoromethane	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Ethylbenzene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Hexachlorobutadiene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Isopropylbenzene	750	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
m,p-Xylene	210	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Methyl tert-butyl ether	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Methylene chloride	< 780	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Naphthalene	960	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
n-Butylbenzene	1,400	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
n-Propylbenzene	250	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
o-Xylene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
sec-Butylbenzene	2,800	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Styrene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
tert-Butylbenzene	270	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01
Tetrachloroethene	< 160	D	61	µg/Kg-dry	08/19/2016 1:36 PM	Container-01 of 01

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Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 1:25:00 PM
Received : 8/17/2016 9:45:00 AM AT21311
Collected By CLIENT

Lab No. : 1608G07-009
Client Sample ID: BPB-07

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
Trichloroethene	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
Trichlorofluoromethane	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
Vinyl acetate	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
Vinyl chloride	< 160	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
Xylene (total)	340	D	61	µg/Kg-dry			08/19/2016 1:36 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	88.2	D	61	%Rec	Limit	33-145	08/19/2016 1:36 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	116	D	61	%Rec	Limit	60-148	08/19/2016 1:36 PM	Container-01 of 01
Surr: Toluene-d8	67.3	D	61	%Rec	Limit	60-132	08/19/2016 1:36 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	21.9		1	wt%	08/19/2016 3:47 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 2:30:00 PM
Received : 8/17/2016 9:45:00 AM AT21312
Collected By CLIENT

Lab No. : 1608G07-010
Client Sample ID: BPB-08

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	< 8.7		1	mg/Kg-dry			08/21/2016 4:04 AM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	42.3		1	%Rec	Limit	16-113	08/21/2016 4:04 AM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
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Attn To : Nicholas Nicholas
Collected : 8/11/2016 2:30:00 PM
Received : 8/17/2016 9:45:00 AM AT21312
Collected By CLIENT

Lab No. : 1608G07-010
Client Sample ID: BPB-08

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,1,1-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,1,2-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,1-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,1-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,1-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2,3-Trichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2-Dibromoethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,3-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,3-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
1,4-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
2,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
2-Butanone	23	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
2-Hexanone	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
4-Isopropyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
4-Methyl-2-pentanone	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Acetone	< 65	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Benzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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2190 Technology Drive
Schenectady, NY 12308

Attn To : Nicholas Nicholas

Collected : 8/11/2016 2:30:00 PM
Received : 8/17/2016 9:45:00 AM AT21312
Collected By CLIENT

Lab No. : 1608G07-010
Client Sample ID: BPB-08

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Bromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Bromodichloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Bromoform	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Bromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Carbon disulfide	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Carbon tetrachloride	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Chlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Chloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Chloroform	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Chloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Dibromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Dibromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Dichlorodifluoromethane	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Ethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Hexachlorobutadiene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Isopropylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
m,p-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Methyl tert-butyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Methylene chloride	< 65	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Naphthalene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
n-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
n-Propylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
o-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
sec-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Styrene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
tert-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01
Tetrachloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 10:49 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

Results are only for the samples and analytes requested.

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the tests requested.

Pace Analytical Services Inc.
2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 2:30:00 PM
Received : 8/17/2016 9:45:00 AM AT21312
Collected By CLIENT

Lab No. : 1608G07-010
Client Sample ID: BPB-08

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
Trichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
Trichlorofluoromethane	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
Vinyl acetate	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
Vinyl chloride	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
Xylene (total)	< 13	D	5	µg/Kg-dry			08/18/2016 10:49 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	103	D	5	%Rec	Limit	33-145	08/18/2016 10:49 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	101	D	5	%Rec	Limit	60-148	08/18/2016 10:49 PM	Container-01 of 01
Surr: Toluene-d8	102	D	5	%Rec	Limit	60-132	08/18/2016 10:49 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	22.7		1	wt%	08/19/2016 3:48 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 3:20:00 PM
Received : 8/17/2016 9:45:00 AM AT21313
Collected By CLIENT

Lab No. : 1608G07-011
Client Sample ID: BPB-09

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	< 8.4		1	mg/Kg-dry			08/21/2016 4:43 AM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	29.2		1	%Rec	Limit	16-113	08/21/2016 4:43 AM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

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Collected : 8/11/2016 3:20:00 PM
Received : 8/17/2016 9:45:00 AM AT21313
Collected By CLIENT

Lab No. : 1608G07-011
Client Sample ID: BPB-09

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,1,1-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,1,2-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,1-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,1-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,1-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2,3-Trichlorobenzene	24	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2,3-Trichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2-Dibromoethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,3-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,3-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
1,4-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
2,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
2-Butanone	29	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
2-Hexanone	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
4-Isopropyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
4-Methyl-2-pentanone	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Acetone	74	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Benzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01

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Collected : 8/11/2016 3:20:00 PM
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Collected By CLIENT

Lab No. : 1608G07-011
Client Sample ID: BPB-09

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Bromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Bromodichloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Bromoform	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Bromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Carbon disulfide	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Carbon tetrachloride	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Chlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Chloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Chloroform	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Chloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Dibromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Dibromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Dichlorodifluoromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Ethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Hexachlorobutadiene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Isopropylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
m,p-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Methyl tert-butyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Methylene chloride	< 63	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Naphthalene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
n-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
n-Propylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
o-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
sec-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Styrene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
tert-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01
Tetrachloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 11:11 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
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Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Lab No. : 1608G07-011
Client Sample ID: BPB-09

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
Trichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
Trichlorofluoromethane	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
Vinyl acetate	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
Vinyl chloride	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
Xylene (total)	< 13	D	5	µg/Kg-dry			08/18/2016 11:11 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	104	D	5	%Rec	Limit	33-145	08/18/2016 11:11 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	119	D	5	%Rec	Limit	60-148	08/18/2016 11:11 PM	Container-01 of 01
Surr: Toluene-d8	93.2	D	5	%Rec	Limit	60-132	08/18/2016 11:11 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	20.6		1	wt%	08/19/2016 3:49 PM	Container-01 of 01

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Date Reported :

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Project Manager : Caitlin Panzarella

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2190 Technology Drive
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Attn To : Nicholas Nicholas
Collected : 8/11/2016 3:50:00 PM
Received : 8/17/2016 9:45:00 AM AT21314
Collected By CLIENT

Lab No. : 1608G07-012
Client Sample ID: BPB-10

Sample Information:
Type : Soil
Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	780	D	10	mg/Kg-dry			08/22/2016 8:43 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	87.6		1	%Rec	Limit	16-113	08/21/2016 5:23 AM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

Qualifiers: E = Value above quantitation range, Value estimated.
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D.F. = Dilution Factor D = Results for Dilution
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Attn To : Nicholas Nicholas
Collected : 8/11/2016 3:50:00 PM
Received : 8/17/2016 9:45:00 AM AT21314
Collected By CLIENT

Lab No. : 1608G07-012
Client Sample ID: BPB-10

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,1,1-Trichloroethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,1,2-Trichloroethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,1-Dichloroethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,1-Dichloroethene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,1-Dichloropropene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2,3-Trichloropropane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2-Dibromoethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2-Dichlorobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2-Dichloroethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,2-Dichloropropane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,3-Dichlorobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,3-Dichloropropane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
1,4-Dichlorobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
2,2-Dichloropropane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
2-Butanone	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
2-Hexanone	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
4-Isopropyltoluene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
4-Methyl-2-pentanone	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Acetone	< 60	Dc	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Benzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016 3:50:00 PM
Received : 8/17/2016 9:45:00 AM AT21314
Collected By CLIENT

Lab No. : 1608G07-012
Client Sample ID: BPB-10

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Bromochloromethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Bromodichloromethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Bromoform	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Bromomethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Carbon disulfide	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Carbon tetrachloride	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Chlorobenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Chloroethane	< 12	Dc	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Chloroform	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Chloromethane	< 12	Dc	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Dibromochloromethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Dibromomethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Dichlorodifluoromethane	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Ethylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Hexachlorobutadiene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Isopropylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
m,p-Xylene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Methyl tert-butyl ether	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Methylene chloride	< 60	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Naphthalene	18	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
n-Butylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
n-Propylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
o-Xylene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
sec-Butylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Styrene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
tert-Butylbenzene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01
Tetrachloroethene	< 12	D	5	µg/Kg-dry	08/21/2016 2:09 PM	Container-01 of 01

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Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Date Reported :

4

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Attn To : Nicholas Nicholas
Collected : 8/11/2016 3:50:00 PM
Received : 8/17/2016 9:45:00 AM AT21314
Collected By CLIENT

Lab No. : 1608G07-012
Client Sample ID: BPB-10

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
Trichloroethene	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
Trichlorofluoromethane	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
Vinyl acetate	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
Vinyl chloride	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
Xylene (total)	< 12	D	5	µg/Kg-dry			08/21/2016 2:09 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	107	D	5	%Rec	Limit	33-145	08/21/2016 2:09 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	121	D	5	%Rec	Limit	60-148	08/21/2016 2:09 PM	Container-01 of 01
Surr: Toluene-d8	97.7	D	5	%Rec	Limit	60-132	08/21/2016 2:09 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	16.3		1	wt%	08/19/2016 3:49 PM	Container-01 of 01

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M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method
Date Reported :

Caitlin Panzarella
Project Manager : Caitlin Panzarella

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2190 Technology Drive
Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016
Received : 8/17/2016 9:45:00 AM AT21315
Collected By CLIENT

Lab No. : 1608G07-013
Client Sample ID: DUP-X

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8015D : Prep Method: SW3545A Prep Date: 8/18/2016 12:57:24 PM Analyst: JB

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Diesel Range Organics C10-C28	< 8.6		1	mg/Kg-dry			08/22/2016 4:11 PM	Container-01 of 01
Surr: 1,4-Dichlorobenzene-d4	61.6		1	%Rec	Limit	16-113	08/22/2016 4:11 PM	Container-01 of 01

NOTES:
C10-C28 quantified with Diesel Fuel #2.

4

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Lab No. : 1608G07-013
Client Sample ID: DUP-X

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,1,1-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,1,2,2-Tetrachloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,1,2-Trichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,1-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,1-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,1-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2,3-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2,3-Trichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2,4-Trichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2,4-Trimethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2-Dibromo-3-chloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2-Dibromoethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2-Dichloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,3,5-Trimethylbenzene/P-ethyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,3-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,3-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
1,4-Dichlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
2,2-Dichloropropane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
2-Butanone	30	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
2-Chloroethylvinyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
2-Chlorotoluene/4-Chlorotoluene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
2-Hexanone	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
4-Isopropyltoluene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
4-Methyl-2-pentanone	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Acetone	< 64	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Benzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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Lab No. : 1608G07-013
Client Sample ID: DUP-X

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Bromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Bromodichloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Bromoform	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Bromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Carbon disulfide	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Carbon tetrachloride	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Chlorobenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Chloroethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Chloroform	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Chloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
cis-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
cis-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Dibromochloromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Dibromomethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Dichlorodifluoromethane	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Ethylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Hexachlorobutadiene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Isopropylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
m,p-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Methyl tert-butyl ether	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Methylene chloride	< 64	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Naphthalene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
n-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
n-Propylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
o-Xylene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
sec-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Styrene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
tert-Butylbenzene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01
Tetrachloroethene	< 13	D	5	µg/Kg-dry	08/18/2016 11:33 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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Schenectady, NY 12308
Attn To : Nicholas Nicholas
Collected : 8/11/2016
Received : 8/17/2016 9:45:00 AM AT21315
Collected By CLIENT

Lab No. : 1608G07-013
Client Sample ID: DUP-X

Sample Information:
Type : Soil

Origin:

Analytical Method: SW8260C : Prep Method: 5035A-L Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Toluene	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
trans-1,2-Dichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
trans-1,3-Dichloropropene	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
Trichloroethene	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
Trichlorofluoromethane	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
Vinyl acetate	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
Vinyl chloride	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
Xylene (total)	< 13	D	5	µg/Kg-dry			08/18/2016 11:33 PM	Container-01 of 01
Surr: 1,2-Dichloroethane-d4	104	D	5	%Rec	Limit	33-145	08/18/2016 11:33 PM	Container-01 of 01
Surr: 4-Bromofluorobenzene	101	D	5	%Rec	Limit	60-148	08/18/2016 11:33 PM	Container-01 of 01
Surr: Toluene-d8	101	D	5	%Rec	Limit	60-132	08/18/2016 11:33 PM	Container-01 of 01

NOTES:
Results may be biased low due to sample not being collected according to 5035A low level specifications.

Analytical Method: D2216 : Analyst: MM

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Percent Moisture	22.1		1	wt%	08/19/2016 3:50 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
B = Found in Blank
D.F. = Dilution Factor D = Results for Dilution
c = Calibration acceptability criteria exceeded for this analyte.Value estimated
H = Received/analyzed outside of analytical holding time
J = Estimated value - below calibration range
M-, M+ = Matrix Spike recovery below / above control limit
N = Indicates presumptive evidence of compound
P = Duplicate RPD outside of control limit
r = Reporting limit below calibration range. Value estimated.
S = Recovery outside of control limits for this analyte
+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Date Reported :

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

PACE ANALYTICAL
575 Broad Hollow Road
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.pacelabs.com

Sample Receipt Checklist

Client Name **PACE-NY** Date and Time Received: **8/17/2016 9:45:00 AM**

Work Order Number: **1608G07** RcptNo: **1** Received by **Paige Doherty**

Completed by: Paige Doherty Reviewed by: Caitlin Panzarella

Completed Date: 8/17/2016 11:38:14 AM Reviewed Date: 8/23/2016 11:08:48 AM

Carrier name: FedEx

Chain of custody present?	Yes	☑	No	☐		
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Are matrices correctly identified on Chain of custody?	Yes	☑	No	☐		
Is it clear what analyses were requested?	Yes	☑	No	☐		
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
Samples in proper container/bottle?	Yes	☑	No	☐		
Were correct preservatives used and noted?	Yes	☐	No	☑	NA	☐
Preservative added to bottles:						
Sample Condition?	Intact	☑	Broken	☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
Were container labels complete (ID, Pres, Date)?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes	☑	No	☐	NA	☐
Response when temperature is outside of range:						
Sample Temp. taken and recorded upon receipt?	Yes	☑	No	☐	To	0.3 °
Water - Were bubbles absent in VOC vials?	Yes	☐	No	☐	No Vials	☑
Water - Was there Chlorine Present?	Yes	☐	No	☐	NA	☑
Water - pH acceptable upon receipt?	Yes	☐	No	☐	No Water	☑
Are Samples considered acceptable?	Yes	☑	No	☐		
Custody Seals present?	Yes	☑	No	☐		
Airbill or Sticker?	Air Bil	☑	Sticker	☐	Not Present	☐
Airbill No:	6903 0826 6540					

Case Number: SDG: PACE-NY507 SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☐ No ☑ NA Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

5035A sampling method for VOCs not followed. Sample received in 4 oz jar.

CorrectiveAction:

4

Pace Analytical
575 Broad Hollow Road , Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

WorkOrder :
1608G07

Certifications

STATE	CERTIFICATION #
NEW YORK	10478
NEW JERSEY	NY158
CONNECTICUT	PH-0435
MARYLAND	208
MASSACHUSETTS	M-NY026
NEW HAMPSHIRE	2987
RHODE ISLAND	LAO00340
PENNSYLVANIA	68-00350

PACE-LI

Nale-NY507

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

Pace Analytical Services, Inc.
2190 Technology Drive, Schenectady, NY 12308
Telephone (518) 346-4592 Fax (518) 381-6055
www.pacelabs.com

LRF # 16080332
(LAB USE ONLY)

DISPOSAL REQUIREMENTS: (To be filled in by Client)
- ○ RETURN TO CLIENT
- ● DISPOSAL BY RECEIVING LAB
- ○ ARCHIVAL BY RECEIVING LAB

Additional charges incurred for disposal (if hazardous) or archival. Call for details.

CLIENT (REPORTS TO BE SENT TO): PACE	PROJECT#/PROJECT NAME: 16080332
PROJECT MANAGER: Nick Nicholas	LOCATION (CITY/STATE) ADDRESS: NY
Project: 1368.001	REQUIRED TURN AROUND TIME: 8/23/2016
Notes: PRESERVATION NOT VARIFIED AT SCHENECTADY LAB.	NAME OF COURIER (IF USED):

ENTER ANALYSIS AND METHOD NUMBER REQUESTED

PRESERVATIVE KEY: 0 - ICE; 1 - HCL; 2 - HNO3; 3 - H2SO4; 4 - NaOH; 5 - Zn. Acetate; 6 - MeOH; 7 - NaHSO4; 8 - Other (Na2SO3)

ELECTRONIC RESULTS: nicholas.nicholas@pacelabs.com; Nicole.Johnson@pacelabs.com

SAMPLE ID	DATE	TIME	MATRIX	GRAB/ COMP	LAB SAMPLE ID (LAB USE ONLY)	NUMBER OF CONTAINERS	VOCs E8260C	TPH-DRO E8015	REMARKS
BPB-01	8/11/16	9:50	S	GRAB	AT21303	2	X	X	16080607-001
BPB-01	8/11/16	10:05	S	GRAB	AT21304	6	X	X	MS/MSD -002
BPB-02	8/11/16	10:10	S	GRAB	AT21305	2	X	X	-003
BPB-03	8/11/16	10:30	S	GRAB	AT21306	2	X	X	-004
BPB-03	8/11/16	10:50	S	GRAB	AT21307	2	X	X	-005
BPB-04	8/11/16	11:15	S	GRAB	AT21308	2	X	X	-006
BPB-05	8/11/16	11:50	S	GRAB	AT21309	2	X	X	-007
BPB-06	8/11/16	12:40	S	GRAB	AT21310	2	X	X	-008
BPB-07	8/11/16	13:25	S	GRAB	AT21311	2	X	X	-009
BPB-08	8/11/16	14:30	S	GRAB	AT21312	2	X	X	-010

AMBIENT OR CHILLED: TEMP: 0.3 | COC TAPE: (Y) N | PROPERLY PRESERVED: (Y) N | OTHER NOTES: Analytical Report [LEVEL-2] EDD: EQUIS-DEC-DE

RECEIVED BROKEN OR LEAKING: Y (N) | COC DISCREPANCIES: Y (N) | RECVD W/I HOLDING TIMES: (Y) N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
SIGNATURE: dlgn	SIGNATURE: Fedex	SIGNATURE: Fedex	SIGNATURE:	SIGNATURE:	SIGNATURE:
PRINTED NAME: Daniel Bubdah	PRINTED NAME:	PRINTED NAME:	PRINTED NAME: Erich Johnson	PRINTED NAME: Erich Johnson	PRINTED NAME: V.D
COMPANY: PACE	COMPANY:	COMPANY:	COMPANY: PACE	COMPANY: Nale-LI	COMPANY: Nale-LI
DATE/TIME: 8/15/16 1600	DATE/TIME:	DATE/TIME:	DATE/TIME: 8/17 9:45	DATE/TIME: 8/17/16 9:45	DATE/TIME: 8/17/16 945

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PACE-LI

MALE-NY 507

CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
2190 Technology Drive, Schenectady, NY 12308
Telephone (518) 346-4592 Fax (518) 381-6055
www.pacelabs.com

LRF # 16080332
(LAB USE ONLY)

DISPOSAL REQUIREMENTS: (To be filled in by Client)
- ○ RETURN TO CLIENT
- ● DISPOSAL BY RECEIVING LAB
- ○ ARCHIVAL BY RECEIVING LAB

Additional charges incurred for disposal (if hazardous) or archival.
Call for details.

CLIENT (REPORTS TO BE SENT TO): PACE	PROJECT#/PROJECT NAME: 16080332
PROJECT MANAGER: Nick Nicholas	LOCATION (CITY/STATE) ADDRESS: NY
Project: 1368.001	REQUIRED TURN AROUND TIME: 8/23/2016
Notes: PRESERVATION NOT VARIFIED AT SCHENECTADY LAB.	NAME OF COURIER (IF USED):

ENTER ANALYSIS AND METHOD NUMBER REQUESTED

PRESERVATIVE KEY: 0 - ICE; 1 - HCL; 2 - HNO3; 3 - H2SO4; 4 - NaOH; 5 - Zn. Acetate; 6 - MeOH; 7 - NaHSO4; 8 - Other (Na2SO3)

ELECTRONIC RESULTS	nicholas.nicholas@pacelabs.com Nicole.Johnson@pacelabs.com			GRAB/	LAB SAMPLE ID	PRESERVATIVE CODE:								
						BOTTLE TYPE:								
						BOTTLE SIZE:								
SAMPLE ID	DATE	TIME	MATRIX	COMP	(LAB USE ONLY)	NUMBER OF CONTAINERS	VOCs E8260C	TPH-DRO E8015						REMARKS:
BPB-09	8/11/16	15:20	S	GRAB	AT21313	2	X	X						16080607 -011
BPB-10	8/11/16	15:50	S	GRAB	AT21314	2	X	X						-012
DUP-X	8/11/16		S	GRAB	AT21315	2	X	X						-013

AMBIENT OR CHILLED: TEMP: 0.3 | COC TAPE: (Y) N | PROPERLY PRESERVED: (Y) N | OTHER NOTES: Analytical Report [LEVEL-2] EDD: EQUIS-DEC-DE

RECEIVED BROKEN OR LEAKING: Y (N) | COC DISCREPANCIES: Y (N) | RECVD W/I HOLDING TIMES: (Y) N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
SIGNATURE: Dlgm	SIGNATURE: Fedex	SIGNATURE: Fedex	SIGNATURE: Erick Johnson	SIGNATURE: Erick Johnson	SIGNATURE:
PRINTED NAME: Daniel Bubniak	PRINTED NAME:	PRINTED NAME:	PRINTED NAME: Erick Johnson	PRINTED NAME: Erick Johnson	PRINTED NAME: D.D
COMPANY: Pace	COMPANY:	COMPANY:	COMPANY: Pace	COMPANY: MALE-LI	COMPANY: MALE-LI
DATE/TIME: 8/15/16 1600	DATE/TIME:	DATE/TIME:	DATE/TIME: 8/17 9:45	DATE/TIME: 8/17/16 9:45	DATE/TIME: 8/17/16 9:45

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CHAIN-OF-CUSTODY / Analytical Request Document

<16080332P1>

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

160803321

of 2

1082317

Section A Required Client Information:

Company: B&L
Address: 10 AIRLINE DRIVE SUITE 200
ALBANY NY 12205
Email To: rmccormick@barton-loguidice.com
Phone: (518) 218-1801 Fax: (518) 218-1805
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: ANDY BARBER
Copy To: NATHAN SHAFFER
ROSEMARY MCCORMICK
Purchase Order No.:
Project Name: ALCO
Project Number: 1368.001.001

Section C Invoice Information:

Attention: ACCOUNTS PAYABLE
Company Name: B&L
Address: 443 ELECTRONICS PKWY LIVERPOOL
Pace Quote Reference:
Pace Project Manager: NICHOLAS NICHOLAS
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER NYSDEC

Site Location STATE: NY

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: VOCs by 8260	DRO
1	TSPB-01	SL	G			8/11/16	9:50		2	X								X	X
2	BPR-01	SL	G				10:05		6	X								X	X
3	BPR-02	SL	G				10:10		2	X								X	X
4	BPB-03	SL	G				10:30		2	X								X	X
5	BPB-03	SL	G				10:50		2	X								X	X
6	~~MW4~~ BPB-04	SL	G				11:15		2	X								X	X
7	BPB-05	SL	G				11:50		2	X								X	X
8	BPB-06	SL	G				12:40		2	X								X	X
9	RPR-07	SL	G				13:25		2	X								X	X
10	BPB-08	SL	G				14:50		2	X								X	X
11	BPB-09	SL	G				15:20		2	X								X	X
12	BPP-10	SL	G			8/11/16	15:50		2	X								X	X

Residual Chlorine (Y/N)

Pace Project No./ Lab I.D.

1	AT21303
2	AT21304
3	AT21305
4	AT21306
5	AT21307
6	AT21308
7	AT21309
8	AT21310
9	AT21311
10	AT21312
11	AT21313
12	AT21314

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Cat B deliverables.	[signature] / B&L	8/12/16	10:40	[signature]	8/12/16	10:40
	Fed Ex	8/16		[signature]	8/17	8:45

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.9	Y	N	Y
0.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ROSEMARY MCCORMICK
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/11/16

ORIGINAL

6903 0826 6540

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. <16080332P2>

160803322

of 2

1882324

Section A (Required Client Information)	Section B (Required Project Information)	Section C (Invoice Information)
Company: B+L	Report To: ANDY BARBER	Attention: ACCOUNTS PAYABLE
Address: 10 AIRLINE DRIVE SUITE 200	Copy To: NATHAN SHAFFER	Company Name: B+L
ALBANY NY 12205		Address: 443 ELECTRONICS PKWY LIVERPOOL
Email To: rmccormick@bergmanlequidice.com	Purchase Order No.:	Pace Quote Reference:
Phone: (518)218-7801 Fax: (518)218-7805	Project Name: ALCO	Pace Project Manager: NICHOLAS NICHOLAS
Requested Due Date/TAT: STANDARD	Project Number: 13168.001.001	Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☒ OTHER NYSDEC

Site Location STATE: NY

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test ↓: Vols by 8260	VOCs by 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DUP-X	SL	G			8/11/16	—		2	X									X	X		AT21315
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	B+L	8/12/16	10:40		8/12/16	10:40	2.0	Y	N	Y
	Fed Ex	8/16			8/17	9:45	0.3	Y	Y	Y

ORIGINAL

6903 0826 6540

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ROSEMARY MCCORMICK

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/11/16

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

<16080332P3>

160803323

Sample Condition Upon Receipt

CLIENT NAME: B+L

PROJECT: ALCO

COURIER: FedEx ☐ UPS ☐ Client ☒ Pace ☐ Other ☐

TRACKING # N/A

CUSTODY SEAL PRESENT: Yes ☐ No ☒ **INTACT:** Yes ☐ No ☐ N/A ☒

PACKING MATERIAL: Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other ☐ **ICE USED:** Wet ☒ Blue ☐ None ☐

THERMOMETER USED: #164 ☒ IR Gun 03 ☐ #160239773 ☐ #160239773-PRB ☐ **COOLER TEMPERATURE (°C):** 2.0

BIOLOGICAL TISSUE IS FROZEN: Yes ☐ No ☐ N/A ☒

COMMENTS: **Temperature is Acceptable?** ☒Yes ☐No

Chain of Custody Present:	☒Yes	☐No		1.
Chain of Custody Filled Out:	☒Yes	☐No		2.
Chain of Custody Relinquished:	☒Yes	☐No		3.
Sampler Name / Signature on COC:	☒Yes	☐No		4.
Samples Arrived within Hold Time:	☒Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☒No		6.
Rush Turn Around Time Requested:	☐Yes	☒No		7.
Sufficient Volume:	☒Yes	☐No		8.
Correct Containers Used:	☒Yes	☐No		9.
- Pace Containers Used:	☒Yes	☐No		
Containers Intact:	☒Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC: - Includes date/time/ID/Analysis	☐Yes	☒No		12. Sample ID's abbreviated on COC. no MS/MSD indicated on COC, we received MS/MSD for sample ID BFB-01.
All containers needing preservation have been checked:	☐Yes	☐No	☒N/A	13.
All containers needing preservation are in compliance with EPA recommendation: - Exceptions that are not checked: TOC, VOA, Subcontract Analyses	☐Yes	☐No	☒N/A	Initial when completed: N/A Lot # of added preservative: N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A	14.
Trip Blank Present:	☐Yes	☐No	☒N/A	15.
Trip Blank Custody Seals Present:	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot #: N/A				

Sample Receipt form filled in: _____

Line-Out (Includes Copying Shipping Documents and verifying sample pH): DB 8/15/16

Log In (Includes notifying PM of any discrepacies and documenting in LIMS): DB 8/15/16

Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook): DB 8/15/16

Appendix K

SVI Assessment for Casino Building

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of Environmental Quality, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2398
www.dec.ny.gov

February 1, 2016

Maxon ALCO Holdings, LLC
Attn: Mr. David Buicko
695 Rotterdam Industrial Park
Schenectady, NY 12306

Re: ALCO-Maxon Site – Parcel A, BCP Site No. C447042, Schenectady
SVI Assessment for Casino Building

Dear Mr. Buicko:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Soil Vapor Intrusion (SVI) Assessment for the Casino Building (01/07/16). A copy is enclosed. The Department and the NYSDOH have the following comments:

1. The Department acknowledges receipt of the SVI Assessment for the Casino Building and this submittal fulfills our request in our 12/10/15 letter (also enclosed).

2. In the third bullet under Recommendations, the Site Management Plans (SMP) for ALCO-Maxon Site – Parcel A and ALCO-Maxon Site – Parcel B will dictate that either the sub-slab soil vapor sampling will be done during the first heating season (instead of one year after the opening) that the Casino building is in operation, or, the volunteer will provide certification that the Casino Building has been maintained under positive pressure since the Casino building has been in operation. The heating season is defined as between November 1st and March 31.

3. If sub-slab sampling is chosen, the Department requests submittal of a Soil Vapor Sampling Work Plan, prior to sampling, for Department and NYSDOH review and approval.

If you have any questions please contact me at (518) 357-2390 or by email at john.strang@dec.ny.gov.

Sincerely,

John R. Strang

John R. Strang, PE.
Environmental Engineer 2
Division of Environmental Remediation
Region 4

Enclosures

ec: T. Owens, Galesi
S. Luciano, Galesi
P. Fallati, Galesi
D. Sommer, Young, Sommer
A. Barber, Barton & Loguidice
J. Deming, NYSDOH
A. DeMarco, NYSDOH
A. Guglielmi, OGC
R. Cozzy, Director, Remedial Bureau B
R. Ostrov, Regional Attorney, Region 4
J. Quinn, RHWRE Region 4

Barton & Loguidice

January 7, 2016

Mr. John R. Strang, P.E.
Environmental Engineer 2
New York State Department of Environmental Conservation
Region 4
1130 South Westcott Road
Schenectady, New York 12306-2014

Via Electronic Mail

Re: ALCO – BCP Sites C447042 and C447043
Schenectady, NY
SVI Assessment for Casino Building

File: 1368.001.001

Dear Mr. Strang:

On behalf of Maxon ALCO Holdings, LLC, Barton & Loguidice, Inc. has prepared the following Soil Vapor Intrusion (SVI) Assessment for the Casino Building premises located on ALCO – BCP Sites C447042 and C447043 (Parcels A and B) in accordance with the NYSDEC letter dated December 10, 2015.

Assessment of Potential Soil Vapor Intrusion

The purpose of this assessment is to evaluate whether site data indicates that there is a potential for site-related contaminants present in the subsurface to migrate in vapor form into the new Casino Building to be erected at the site; an associated task is to quantify, to the extent possible, the magnitude of a potential SVI risk and recommend possible mitigation if a potential vapor intrusion condition is identified.

The most recent data for the site comes from the Remedial Investigation Report (Clough Harbor Associates, August 2012), which includes data for shallow and deep soil samples, groundwater and soil vapor samples. Detections of volatile organic compounds are summarized on the attached table for each of these sample matrices for samples located in the general vicinity of the footprint of the Casino Building; sample locations relative to the casino footprint are shown on the attached figure. It should be noted that an Interim Remedial Measure was conducted in the area of MW-45 in 2014 due to the detection of free-phase petroleum product. The IRM consisted of the removal of roughly 1,172 tons of petroleum-impacted soils down to, and below,

10 Airline Drive • Suite 200 • Albany, New York 12205
Telephone: 518-218-1801 • Facsimile: 518-218-1805 • www.BartonandLoguidice.com

water table, along with collection of confirmatory samples. The removal of petroleum impacted source soils was effectively implemented.

Taken as a whole, the surface and subsurface soil data indicate sporadic residual detections of different VOCs, at concentrations well below their respective Part 375 Soil Cleanup Objectives for the protection of groundwater. The groundwater data also indicate sporadic residual detections of VOCs at concentrations below their respective drinking water standards; the minor detections of different VOCs in groundwater are not indicative of a contaminant source area, particularly considering the elimination of soils in the MW-45 area during the IRM.

The soil vapor data exhibit a similar pattern to the soil and groundwater data, i.e., sporadic part per billion concentrations of different VOCs not indicative of a contaminant source area. With the exception of seven chlorinated VOCs that are addressed by NYSDOH Guidance, cleanup guidance concentrations are not available for soil vapor. Three of the VOCs detected (carbon tetrachloride at 8.6 ug/m3 in sample SV-B3A, trichloroethene at 11 ug/m3 in sample SV-C1, and trichloroethene at 66 ug/m3 in sample SV-A5) could have the potential to trigger follow-up indoor air sampling if they had been detected in a sub-slab setting, according to the NYSDOH Guidance document. The sampling data confirms that with the exception of acetone (which was not included in the summary table as it is a common laboratory artifact and was also detected in blank and ambient samples), the concentrations of the majority of the VOCs that were detected were close to their respective detection limits.

An additional consideration is that trichloroethene was detected in sub-slab vapor and ambient air samples in Building 306 during the Supplemental Remedial Investigation (Barton & Loguidice, P.C., October, 2013) above selected NYSDOH Guidance values. Building 306 is located roughly upgradient from a groundwater flow perspective from the casino building. Air distribution in Building 306 was subsequently modified and follow-up sampling confirmed that trichloroethene was no longer detectable above the Guidance values (Barton & Loguidice, P.C., April, 2014). Given the groundwater flow direction, it has been suggested that the detections of VOCs could have originated from a known contaminants source area located off-site and upgradient of Building 306.

The preceding characterization of the existing data is supported by the conclusions of the RI and SRI, as well as the Decision Documents issued by NYSDEC. The data suggest that a VOC source area is not present under or near the footprint of the Casino Building, and further that there are not sufficient residual VOC concentrations in environmental media to represent a potential soil vapor intrusion risk to the Casino Building that would mandate mitigation. However, the inherent variability of this (and any) environmental data set, coupled with the VOC detections under Building 306, creates a situation where there could theoretically be a minimal risk of potential soil vapor intrusion.

Recommendations

Based on the foregoing assessment, reasonable soil vapor intrusion mitigation is suggested for the Casino Building. It is our understanding that the following measures are reasonable, sufficient, and have been implemented to mitigate any minimal risk of potential soil vapor intrusion:

- A vapor barrier has been incorporated into the slab system of the Casino Building (see attached information).
- Soil vapor sampling points have been incorporated into the slab system of the Casino Building (see attached information).
- The Site Monitoring Plan (SMP) will dictate either the performance of sub-slab soil vapor sampling approximately one year after the opening of the Casino operation or a certification that the Casino Building has been maintained under positive pressure. The SMP is subject to a NYSDEC and NYSDOH review and approval process.

Please feel free to contact the undersigned at (518) 218-1801 with any questions or need for additional information.

Very truly yours,

BARTON & LOGUIDICE, INC.

Scott D. Nostrand, P.E.
Senior Vice President

Andrew J. Barber
Senior Managing Environmental Consultant

SDN/AJB/akg
Attachments
cc: Steve Porter, Esq. – Maxon ALCO Holdings LLC
Steve Luciano – Maxon ALCO Holdings LLC
Paul Fallati – Maxon ALCO Holdings LLC
Dean Sommer, Esq. – Young Sommer
Rich Ostrov – NYSDEC Region 4, OGC
Al DeMarco – NYSDOH

ALCO – Summary of VOC Detections in Samples Under or in Proximity to the Casino Building

Soil Samples Concentrations in ug/kg	SB-A1	SS-A1	SB-A2	SB-A3	SS-A2	TP-A2	SS-B2	SS-B3
Acetone	ND	ND	12	ND	ND	ND	6.5	11
Benzene	ND	ND	ND	ND	ND	100		ND
2-Butanone	ND	ND	2.8	ND	ND	ND	2.3	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	61	ND	ND
Cis 1,2-Dichloroethene	ND	ND	ND	ND	ND	64	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	140	ND	ND
Methyl Acetate	ND	ND		ND	ND	230	ND	ND
Methyl cyclohexane	ND	ND	ND	ND	ND	860	ND	ND
1-methylethyl benzene	ND	ND	ND	ND	ND	940	ND	ND
Toluene	ND	ND	1.0	ND	ND	78	ND	ND
Trichloroethene	3.7	ND	ND	ND	ND	ND	ND	1.8
Xylenes	ND	ND	ND	ND	ND	320	ND	ND

ND – Not Detected

Groundwater Samples Concentrations in ug/L	MW-1	MW-4	MW-6	MW-32	MW-40	MW-45
Acetone	4.0	ND	ND	ND	ND	5.2
Benzene	ND	ND	ND	ND	ND	19
Chlorobenzene	ND	ND	ND	ND	ND	2.9
Cyclohexane	0.74	ND	ND	ND	ND	8.2
Methyl cyclohexane	0.67	ND	ND	ND	ND	12
1-methylethyl benzene	3.1	ND	ND	ND	ND	ND
Toluene	ND	0.72	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	0.57	ND

ND – Not Detected

Soil Vapor Samples Concentrations in ug/m3	**SV-A1**	**SV-A2**	**SV-A3**	**SV-A4**	**SV-A5**	**SS-B3A**	**SV-C1**
Benzene	ND	ND	ND	ND	ND	ND	100
Butane	ND	ND	ND	71	120	ND	ND
2-Butanone	ND	ND	ND	ND	ND	1.6	1.9
Carbon Disulfide	ND	ND	ND	ND	ND	6.7	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	8.6	2.4
Chloroform	ND	ND	ND	ND	ND	1.4	4.1
Ethylbenzene	ND	ND	ND	ND	ND	1.1	2.5
n-Heptane	ND	ND	ND	ND	74	ND	0.81
Hexane	ND	71	ND	ND	110	1.0	1.2
Isopropanol	ND	ND	ND	ND	ND	13	7.1
Naphthalene	ND	ND	ND	ND	ND	ND	2.7
Tetrachloroethene	ND	ND	ND	ND	ND	9.2	2.7
Toluene	ND	ND	1.0	ND	ND	ND	78
Trichloroethene	ND	ND	ND	ND	66	ND	11
Trichlorofluoromethane	ND	ND	280	77	ND	21	9.7
Xylenes	ND	ND	ND	ND	ND	8.2	16.9

ND – Not Detected

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

COMPLETED CONSTRUCTION

Significant Construction Changes Are Shown

By _____ Date _____

Ck'd _____ Date _____

REVISIONS

GALESI GROUP

MAXON ALCO HOLDINGS, LLC

Approximate Locations of Environmental Samples Around New Casino Building

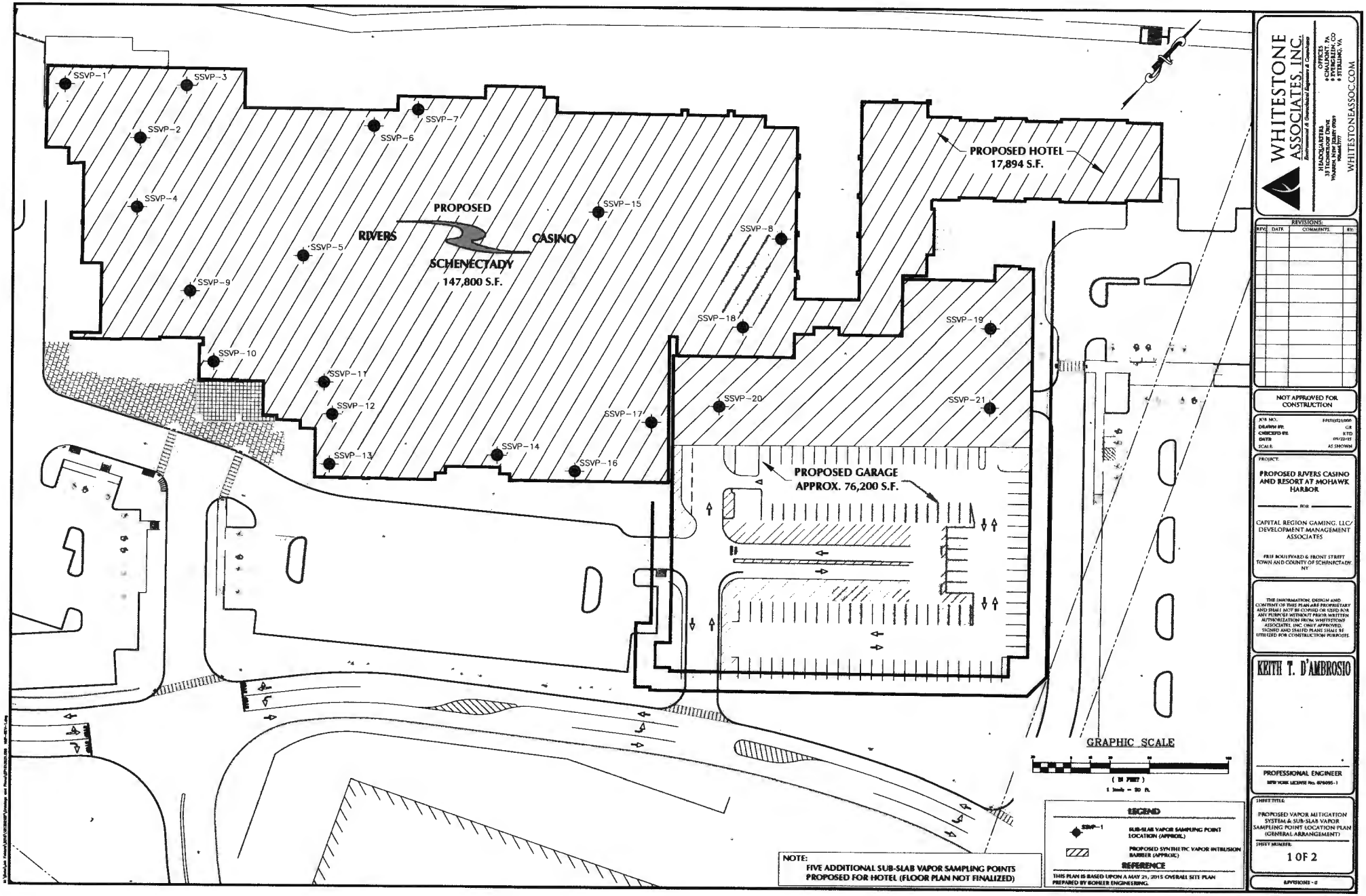
CITY OF SCHENECTADY SCHENECTADY COUNTY, NEW YORK

Barton Loguidice, D.P.C.

Date
JANUARY 2016

Sheet Number
1

File Number
1368.001.001



WHITESTONE ASSOCIATES, INC.
Environmental & Geotechnical Engineers & Consultants
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908-668-0099
OFFICES
• CHALFONT, PA
• EVERGREEN, CO
• STERLING, VA
WHITESTONEASSOC.COM

REVISIONS:

REV.	DATE	COMMENTS	BY

NOT APPROVED FOR CONSTRUCTION

JOB NO. P#15121.000
DRAWN BY: GR
CHECKED BY: KTD
DATE: 09/22/15
SCALE: AS SHOWN

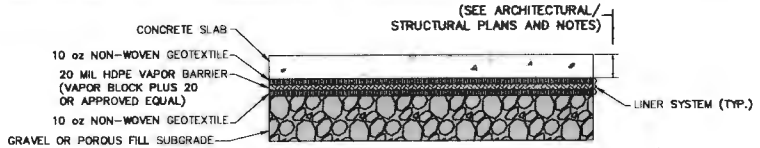
PROJECT:
PROPOSED RIVERS CASINO AND RESORT AT MOHAWK HARBOR
FOR
CAPITAL REGION GAMING, LLC/ DEVELOPMENT MANAGEMENT ASSOCIATES
FRIE BOULEVARD & FRONT STREET
TOWN AND COUNTY OF SCHENECTADY NY

KEITH T. D'AMBROSIO
PROFESSIONAL ENGINEER
NEW YORK LICENSE No. 076095-1

SHEET TITLE:
PROPOSED VAPOR MITIGATION SYSTEM & SUB-SLAB VAPOR SAMPLING POINT LOCATION PLAN (GENERAL ARRANGEMENT)

SHEET NUMBER:
1 OF 2

REVISIONS - 0



VAPOR MITIGATION LINER SYSTEM PROFILE (TYP.)

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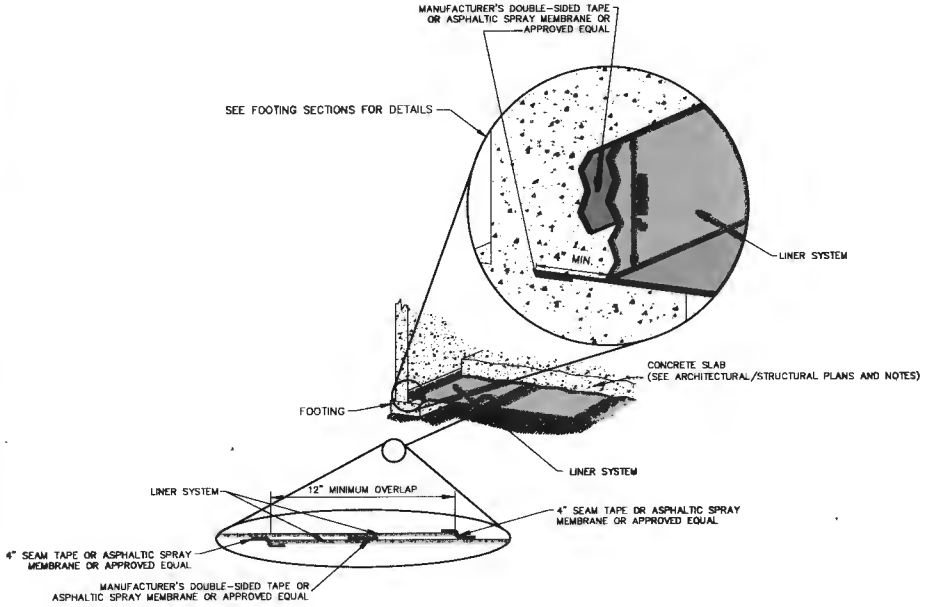

VAPOR BARRIER INSTALLATION DETAIL (TYP.)

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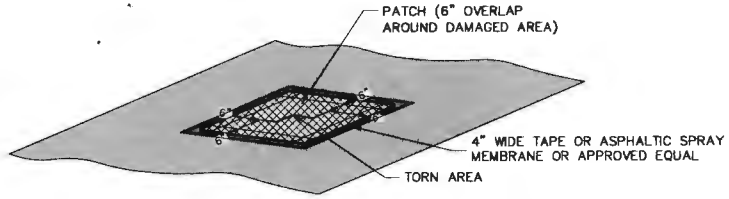

VAPOR BARRIER REPAIR (TYP.)

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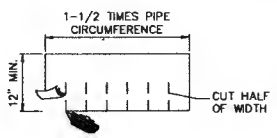
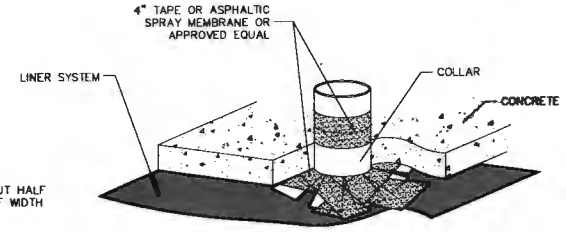


COLLAR



COLLAR INSTALLATION

PENETRATIONS (TYP.)

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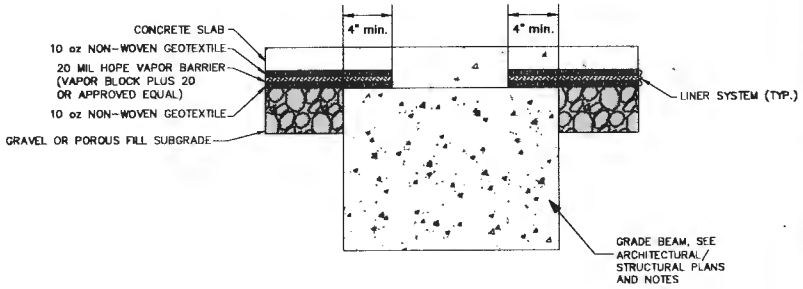
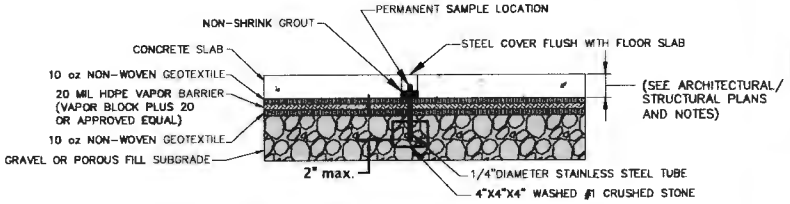


INSTALLATION DETAIL AT GRADE BEAM (TYP.)

SCALE: N.T.S.



SUB-SLAB VAPOR SAMPLING POINT PROFILE (TYP.)

SCALE: N.T.S.

NOTES:

1. THIS PLAN IS FOR USE IN SIZING AND GENERAL LAYOUT OF VAPOR MITIGATION SYSTEM ONLY. ANY STRUCTURAL ELEMENTS SHOWN ARE FOR GENERAL ILLUSTRATION ONLY. REFER TO STRUCTURAL DRAWINGS AND/OR CONTACT THE STRUCTURAL ENGINEER OF RECORD REGARDING ANY STRUCTURAL COMPONENTS.
2. 20 MIL HDPE VAPOR BLOCK PLUS 20 (OR EQUAL) SHALL BE INSTALLED CONTINUOUSLY BENEATH THE CONCRETE FLOOR SLAB IN ACCORDANCE WITH ASTM STANDARD E-1643-94 AND MANUFACTURER'S INSTRUCTIONS. ALL SEAMS SHALL OVERLAP MINIMUM OF 12" AND BE SEALED WITH 4" WIDE TAPE OR ASPHALTIC SPRAY MEMBRANE.
3. ALL PENETRATIONS THROUGH THE VAPOR BARRIER SHALL BE SEALED PER MANUFACTURER'S SPECIFICATIONS AND THE DETAILS.
4. THE VAPOR BARRIER SHALL BE SECURED TO THE CONCRETE FOOTING USING 4" WIDE TAPE OR ASPHALTIC SPRAY MEMBRANE FASTENED PER MANUFACTURER'S INSTRUCTIONS.

WHITESTONE ASSOCIATES, INC.
Environmental & Geotechnical Engineers & Consultants
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• COLLINGDALE, PA
• EVERGREEN, CO
• STERLING, VA
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(401.828.7777)
WHITESTONEASSOC.COM

REVISIONS

REV.	DATE	COMMENTS	BY

NOT APPROVED FOR CONSTRUCTION

JOB NO.	[illegible]
DRAWN BY:	GJS
CHECKED BY:	KTD
DATE:	09/23/15
SCALE:	AS SHOWN

PROJECT

PROPOSED RIVERS CASINO AND RESORT AT MOHAWK HARBOR

FOR

CAPITAL REGION GAMING LLC/ DEVELOPMENT MANAGEMENT ASSOCIATES

FRIE BOULEVARD & FRONT STREET
TOWN AND COUNTY OF SCHENECTADY, NY

KEITH T. D'AMBROSIO

PROFESSIONAL ENGINEER
NEW YORK LICENSE No. 076095-1

SHEET TITLE

VAPOR MITIGATION SYSTEM DETAILS

SHEET NUMBER

2 OF 2

REVISIONS - 0

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of Environmental Quality, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2398
www.dec.ny.gov

December 10, 2015

Maxon ALCO Holdings, LLC
Attn: Mr. David Buicko
695 Rotterdam Industrial Park
Schenectady, NY 12306

Re: Development – Casino
ALCO-Maxon Site – Parcel A, BCP Site No. C447042, Schenectady

Dear Mr. Buicko:

The Department has received a Change of Use Notification for the Site C447042 which details a pending development project at this site.

Please provide the Department the required assessment for the Casino development project. The assessment should include conclusions regarding the need for mitigation measures and/or recommendations for further data collection to complete the assessment. This assessment should be stamped by a professional engineer licensed to practice in New York State, and submitted within 30 days of this letter.

We appreciate your attention to this matter. If you have any questions or need additional information, you may contact me at (518) 357-2390 or by email at john.strang@dec.ny.gov.

Sincerely,

John R. Strang, PE.
Environmental Engineer 2
Division of Environmental Remediation
Region 4

ec: J. Quinn, RHWRE Region 4
A. Guglielmi, OGC
R. Cozzy, Director, Remedial Bureau B
R. Ostrov, Regional Attorney, Region 4
L. Smith, Galesi
S. Luciano, Galesi
P. Fallati, Galesi
D. Sommer, Young, Sommer
A. Barber, Barton & Loguidice
J. Deming, NYSDOH
A. DeMarco, NYSDOH

Exhibit A

Site Description

SCHEDULE "A" PROPERTY DESCRIPTION

PARCEL A
ENVIRONMENTAL EASEMENT

ALL that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, more particularly bounded and described as follows:

BEGINNING at a point on the division line between the lands now or formerly of Legere Holdings LLC to the southwest and the lands now or formerly of Maxon Alco Holdings to the northeast, said point located the following five (5) courses and distances from the intersection between the northerly bounds of Front Street with the northeasterly bounds of Mohawk Avenue:

1. North 71°28'18" East along the northerly bounds of Front Street for a distance of 44.88 feet to a point;
2. North 18°41'04" West along the above described division line for a distance of 16.44 feet to a point;
3. North 26°42'22" West continuing along said division line for a distance of 205.40 feet to a point;
4. North 20°29'20" West continuing along said division line for a distance of 93.46 feet to a point;
5. North 20°54'00" West continuing along said division line for a distance of 79.76 feet to the **Point of Beginning**.

THENCE from said **POINT OF BEGINNING** continuing along the aforementioned division line, N.20°-54-00"W., 172.94 feet to a point;

THENCE through the lands now or formerly of Legere Holdings LLC and along the proposed 2016 southerly bounds of the Mohawk River the following 27 (twenty seven) courses and distances;

1. S.86°23'57"E. a distance of 30.51 feet to a point;
2. N.60°33'24"E., a distance of 395.66 feet to a point;
3. N.47°06'03"E., a distance of 147.76 feet to a point;
4. N.50°10'38"E., a distance of 256.90 feet to a point;
5. N.51°44'43"E., a distance of 67.54 feet to a point;
6. N.40°44'47"E., a distance of 128.80 feet to a point;
7. N.38°20'50"W., a distance of 45.04 feet to a point;
8. N.51°39'10"E., a distance of 60.00 feet to a point;
9. N.38°20'50"W., a distance of 12.00 feet to a point;
10. N.51°39'40"E., a distance of 56.01 feet to a point;
11. S.38°20'50"E., a distance of 31.62 feet to a point;
12. S.86°34'51"E., a distance of 38.48 feet to a point;
13. N.67°04'26"E., a distance of 50.85 feet to a point;
14. N.63°05'03"E., a distance of 72.34 feet to a point;
15. N.58°01'17"E., a distance of 148.35 feet to a point;
16. N.62°18'55"E., a distance of 149.08 feet to a point;

17. N.60°17'56"E., a distance of 147.13 feet to a point;
18. N.68°51'49"E.,a distance of 198.99 feet to a point;
19. N.72°54'52"E., a distance of 39.41 feet to a point;
20. N.75°31'33"E., a distance of 388.14 feet to a point;
21. N.78°46'12"E., a distance of 217.90 feet to a point;
22. N.75°35'27"E., a distance of 70.95 feet to a point;
23. N.73°24'10"E., a distance of 86.14 feet to a point;
24. N.65°19'17"E., a distance of 259.65 feet to a point;
25. N.59°20'01"E., a distance of 95.39 feet to a point;
26. N.45°34'04"E., a distance of 113.68 feet to a point;
27. N.23°48'28"E., a distance of 26.87 feet to a point in the westerly line of Maxon Road (also known as Maxon Road Arterial Highway);

THENCE along the westerly line of Maxon Road by the following three (3) courses:

1. S.18°05'10" E., 110.78 feet to a point;
2. S.28°40'50" W., 231.11 feet to a point;
3. S.28°06'00" W., 175.82 feet to a point;

THENCE through the lands of Maxon Alco Holdings LLC by the following ten (10) courses:

1. S.68°50'10" W., 227.13 feet to a point;
2. S.68°31'58" W., 365.92 feet to a point;
3. S.69°22'35" W., 202.92 feet to a point;
4. N.89°30'41" W., 83.83 feet to a point;
5. S.68°53'43" W., 133.57 feet to a point;
6. S.68°49'05" W., 454.67 feet to a point;
7. N.20°59'34" W., 40.13 feet to a point;
8. S.69°00'26" W., 407.96 feet to a point;
9. S.21°28'44" W., 315.76 feet to a point;
10. S.67°51'46" W., 751.18 feet to the **POINT OF BEGINNING.**

EXCEPTING THEREFROM A PARCEL OF LAND CONVEYED TO RENSSELAER POLYTECHNIC INSTITUTE BY DEED FILED IN THE OFFICE OF THE CLERK OF SCHENECTADY COUNTY IN LIBER 1186 OF DEEDS AT PAGE 188 SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING at a point in the lands of Maxon Alco Holdings LLC said **POINT OF BEGINNING** located as follows: **COMMENCING** at a point in the southerly boundary of the Mohawk River at its intersection with the westerly line of Maxon Road (also known as Maxon Road Arterial Highway); **THENCE** from said **POINT OF COMMENCMENT** ,S. 63° – 55' – 46" W., 818.70 feet to the first mentioned **POINT OF BEGINNING** which point is the **POINT OF BEGINNING** of the parcel herein described; **THENCE** through the first herein described parcel the following nine (9) courses and distances

1) S. 76° – 55' – 10" W., 165.95 feet to a point;
2) S. 12° – 19' – 05" E., 110.15 feet to a point;
3) N. 74° – 09' – 28" E., 69.13 feet to a point;
4) S. 35° – 16' – 17" E., 6.68 feet to a point;
5) N. 61° – 49' – 45" E., 19.69 feet to a point;
6) N. 67° – 28' – 03" E., 28.46 feet to a point;
7) N. 57° – 38' – 48" E., 26.14 feet to a point;

8) N. 47° – 54' – 28" E., 26.89 feet to a point
9) N. 12° – 40' – 49" W., 81.53 feet to the **POINT AND PLACE OF BEGINNING.**

SUBJECT to all easements, rights-of-way or restrictions of record.

PARCEL A CONTAINS 19.15± acres of land, more or less.

K&R:

ROBERT A. DANASCI, ESQ.
YOUNG/SOMMER LLC
5 PALISADES DR., SUITE 300
ALBANY, NY 12205

Exhibit B

Site Survey

PARCEL A
WITHOUT LANDS UNDERWATER
LANDS OF MAXON ALCO HOLDINGS, LLC

ALL that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, more particularly bounded and described as follows:

BEGINNING at a point on the division line between the lands now or formerly of Legere Holdings LLC to the southwest and the lands now or formerly of Maxon Alco Holdings to the northeast, said point located the following five (5) courses and distances from the intersection between the northerly bounds of Front Street with the northeasterly bounds of Mohawk Avenue:

1. North 71°2918" East along the northerly bounds of Front Street for a distance of 44.88 feet to a point;
2. North 18°4158" West along the above described division line for a distance of 16.44 feet to a point;
3. North 26°4222" West continuing along said division line for a distance of 205.40 feet to a point;
4. North 20°2920" West continuing along said division line for a distance of 93.46 feet to a point;
5. North 20°5400" West continuing along said division line for a distance of 78.76 feet to the **Point of Beginning**.

THENCE from said **POINT OF BEGINNING** continuing along the aforementioned division line, N.20o-54-00"W., 172.94 feet to a point;

THENCE through the lands now or formerly of Legere Holdings LLC and along the proposed 2016 southerly bounds of the Mohawk River the following 27 (twenty seven) courses and distances;

1. S.86°2757"E, a distance of 30.51 feet to a point;
2. N.46°5124"E, a distance of 395.66 feet to a point;
3. N.47°0613"E, a distance of 147.76 feet to a point;
4. N.50°1035"E, a distance of 256.90 feet to a point;
5. N.51°4443"E, a distance of 67.54 feet to a point;
6. N.48°4437"E, a distance of 126.80 feet to a point;
7. N.38°2050"W., a distance of 45.64 feet to a point;
8. N.51°3910"E., a distance of 60.00 feet to a point;
9. N.38°2050"W., a distance of 12.00 feet to a point;
10. N.51°3940"E., a distance of 56.01 feet to a point;
11. S.38°2050"E., a distance of 31.62 feet to a point;
12. S.46°3453"E., a distance of 38.48 feet to a point;
13. N.47°0428"E., a distance of 50.85 feet to a point;
14. N.43°0910"E., a distance of 72.34 feet to a point;
15. N.35°0011"E., a distance of 148.35 feet to a point;
16. N.42°1455"E., a distance of 149.08 feet to a point;
17. N.40°1756"E., a distance of 147.13 feet to a point;
18. N.48°5139"E.,a distance of 198.99 feet to a point;
19. N.72°5452"E., a distance of 39.41 feet to a point;
20. N.25°3153"E., a distance of 308.14 feet to a point;
21. N.39°4612"E., a distance of 217.90 feet to a point;
22. N.25°3527"E., a distance of 70.95 feet to a point;
23. N.13°2419"E., a distance of 86.14 feet to a point;
24. N.63°1917"E., a distance of 239.65 feet to a point;
25. N.39°2001"E., a distance of 95.39 feet to a point;
26. N.45°4345"E., a distance of 113.68 feet to a point;
27. N.23°4829"E., a distance of 26.87 feet to a point in the westerly line of Mason Road (also known as Maxon Road Arterial Highway);

THENCE along the westerly line of Maxon Road by the following three (3) courses:

1. S.18 ° 0910" E., 110.78 feet to a point;
2. S.28 ° 4050" W., 211.11 feet to a point;
3. S.28 ° 0650" W., 175.82 feet to a point;

THENCE through the lands now or formerly of Maxon Alco Holdings LLC by the following ten (10) courses:

1. S.68 ° 5010" W., 227.13 feet to a point;
2. S.68 ° 3158" W., 305.92 feet to a point;
3. S.69 ° 2235" W., 202.92 feet to a point;
4. N.89 ° 3041" W., 83.83 feet to a point;
5. S.68 ° 5743" W., 133.57 feet to a point;
6. S.68 ° 4955" W., 454.67 feet to a point;
7. N.20 ° 5934" E., 40.13 feet to a point;
8. S.69 ° 0026" W., 407.96 feet to a point;
9. S.21 ° 2644" W., 315.76 feet to a point;
10. S.67 ° 5146" W., 751.18 feet to the **POINT OF BEGINNING.**

EXCEPTING THEREFROM A PARCEL OF LAND CONVEYED TO RENSSELAER POLYTECHNIC INSTITUTE BY deed filed in the Office of the Clerk of Schenectady County in Liber 1186 of Deeds at Page 188AID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING at a point in the lands of Maxon Alco Holdings LLC said **POINT OF BEGINNING** located as follows:
COMMENCING at a point in the southerly boundary of the Mohawk River at its intersection with the westerly line of Maxon Road (also known as Maxon Road Arterial Highway); **THENCE** from said **POINT OF COMMENCEMENT** ,S. 63° - 35' - 46" W., 838.70 feet to the first mentioned **POINT OF BEGINNING** which point is the **POINT OF BEGINNING** of the parcel herein described;
THENCE through the first herein described parcel the following nine (9) courses and distances

1) S. 76 ° - 55' - 10" W., 165.95 feet to a point;
2) N. 12 ° - 19' - 05" E., 110.15 feet to a point;
3) N. 74 ° - 09' - 26" E., 69.13 feet to a point;
4) S. 35 ° - 10' - 17" E., 6.68 feet to a point;
5) N. 67 ° - 49' - 47" E., 19.69 feet to a point;
6) N. 67 ° - 29' - 03" E., 28.46 feet to a point;
7) N. 57 ° - 39' - 48" E., 26.14 feet to a point;
8) N. 47 ° - 54' - 28" E., 26.89 feet to a point;
9) N. 12 ° - 49' - 48" W., 81.53 feet to the **POINT AND PLACE OF BEGINNING.**

SUBJECT to all easements, rights-of-way or restrictions of record.

PARCEL A CONTAINS 19.15+ acres of land, more or less.

PARCEL B
LANDS OF MAXON ALCO HOLDINGS, LLC

ALL that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, more particularly bounded and described as follows:

BEGINNING at a point in the northerly boundary of the Front Street at its intersection with the easterly line of lands now or formerly of Legere Holdings, LLC as described in a deed filed in the Office of the Clerk of Schenectady County in Liber 1684 of Deeds at Page 306; **THENCE** along said the easterly line of lands now or formerly of Legere Holdings, LLC by the following four (4) courses:

1) N. 18° - 41' - 04" W., 16.44 feet to a point;
2) N. 26° - 42' - 22" W., 205.40 feet to a point;
3) N. 20° - 29' - 20" W., 93.46 feet to a point;
4) N. 20° - 54' - 00" W., 79.76 feet to a point;

THENCE through the lands of Maxon Alco Holdings LLC by the following ten (10) courses:

1) N. 67° - 51' - 46" E., 751.18 feet to a point
2) N. 21° - 28' - 44" E., 315.76 feet to a point;
3) N. 69° - 00' - 26" E., 407.96 feet to a point;
4) S. 20° - 59' - 34" E., 40.13 feet to a point;
5) N. 68° - 49' - 05" E., 454.67 feet to a point;
6) N. 68° - 53' - 43" E., 133.57 feet to a point;
7) S. 39° - 53' - 41" E., 83.63 feet to a point;
8) N. 69° - 22' - 35" E., 202.92 feet to a point;
9) N. 68° - 31' - 58" E., 365.92 feet to a point;
10) N. 68° - 50' - 10" E., 227.13 feet to a point in the westerly line of Maxon Road (also known as Maxon Road Arterial Highway);

THENCE along the westerly line of Maxon Road by the following nine (9) courses:

1) S. 25° - 29' - 30" W., 65.07 feet to a point;
2) S. 10° - 55' - 10" W., 86.17 feet to a point;
3) S. 28° - 07' - 50" W., 490.05 feet to a point of curvature having a radius of 1,386.53 feet;
4) thence southwesterly along a curve to the right having a radius of 1,386.53 feet for an arc distance of 85.09 feet, said arc being subtended by a chord having a bearing of S. 29° - 53' - 19" W. and a chord length of 85.08 feet;
5) N. 58° - 21' - 50" W., 10.50 feet to a point;
6) S. 38° - 03' - 10" W., 144.42 feet to a point;
7) S. 41° - 05' - 00" W., 182.58 feet to a point;
8) S. 47° - 06' - 20" W., 96.45feet to a point;
9) S. 82° - 18' - 20" W., 74.68 feet to a point;

THENCE through the lands now or formerly Maxon Alco Holdings LLC, the following two (2) courses and distances:

1) N. 69° - 04' - 35" E., 11.56 feet to a point;
2) N. 69° - 17' - 41" E., 15.87 feet to a point;

THENCE along the lands now or formerly of S&T Operations LTD. as described in Liber 1796 Page 545 to the north and the herein described parcel to the south, N. 69° - 17' - 41" E., 253.93 feet to a point;

THENCE S. 23° - 33' - 20" E., 155.92 feet to a point in the northerly bounds of Maxon Road (also known as Maxon Road Arterial Highway);

THENCE along the northerly line of Maxon Road S. 66° - 26' - 40" W., 117.34 feet to a point;

THENCE along the northerly bounds of New York State Department of Transportation appropriation map known as Map 3 Parcel 4, N.66°19'58"W., a distance of 202.40 feet to a point on a curve having a radius of 51.75 feet

THENCE along the easterly line of Front Street and curving to the left around the arc of said circular curve having a radius of 51.75 feet for an arc distance of 56.58 feet, said arc being subtended by a chord having a bearing of N. 65° - 49' - 18" W. and a chord length of 53.36 feet, to the point of tangency of said curve being a point in the north line of Front Street;

THENCE along the northerly line of Front Street by the following three (3) courses:

1) S. 82° - 52' - 00" W., 145.40 feet to a point;
2) S. 89° - 06' - 50" W., 242.51 feet to a point;
3) S. 71° - 28' - 20" W., 193.22 feet to the **POINT AND PLACE OF BEGINNING.**

SUBJECT to all easements, rights-of-way or restrictions of record.

PARCEL B CONTAINS 30.62± acres of land, more or less.

NOTE:
Map filed in accordance with approved variances granted by the Planning Department for the City of Schenectady. Original copies of any approved variance(s) can be found in the corresponding property file located in the Bureau of Code Enforcement.

NOTE:
This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law. The engineering and institutional controls for this Easement are set forth in more detail in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov".

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

MOHAWK RIVER
MATCH LINE
PARCEL A
PARCEL B
PARCEL C-1
PARCEL C-2
PROPOSED LOT 7
SF=240,318
ACRES=5.52
PROPOSED LOT 8
SF=980,456
ACRES=22.51
PROPOSED LOT 9
SF=43,700
ACRES=1.00
PROPOSED LOT 10
SF=127,719
ACRES=2.93
PROPOSED LOT 11
SF=39,607
ACRES=0.91
PROPOSED LOT 12
SF=12,736
ACRES=0.29
PROPOSED PUBLIC R.O.W.
EXISTING LOT
EXISTING LOT
EXISTING LOT
PORTION OF LOT 8
FRONT STREET
ERIE BOULEVARD
P.O.B. PARCEL "A"
P.O.B. PARCEL "B"

HERSHBERG & HERSHBERG
Consulting Engineers and Land Surveyors
18 Locust Street
Albany, New York 12203

ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESIONAL ENGINEER OR LAND SURVEYOR, IS ILLEGAL

STATE OF NEW YORK · DANIEL R. HERSHBERG · 044226 · LICENSED PROFESSIONAL ENGINEER & LAND SURVEYOR

REVISIONS		
REMARKS	DATE	
ADDED PARCEL 1.5	2-24-16	
REVISED PARCEL 4	2-24-16	
ADDED OVERALL BEARINGS	3-7-16	
REVISED EASEMENTS ADJUSTED LOT 7	3-8-16	
REVISED SHOWN	3-16-16	
MORE ADD BUILDINGS SHOWN	3-16-16	
REVISED ADDED	3-30-16	

SUBDIVISION PLAN
MOHAWK HARBOR
SCHENECTADY, NEW YORK

FILE: 2012-0158-SUB | SCALE: 1"=50' | BY: SMcC | CHK: DRH | DATE: 12/29/2015 | 12015B-SUBDIVISION-drawRev4.DWG

SUB-1

NOTE:
This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law. The engineering and institutional controls for this Easement are set forth in more detail in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov".

NOTE:
Map filed in accordance with approved variances granted by the Planning Department for the City of Schenectady. Original copies of any approved variance(s) can be found in the corresponding property file located in the Bureau of Code Enforcement.

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

MATCH LINE

MOHAWK RIVER

ERIE BOULEVARD

PARCEL A

PARCEL B

PARCEL C-1

PARCEL C-2

EXISTING LOT

PROPOSED PUBLIC R.O.W.

PROPOSED LOT 12
SF=12,736
ACRES=0.29

PROPOSED LOT 7
SF=240,318
ACRES=5.52

PROPOSED LOT 14
SF=201,594
ACRES=4.63

PROPOSED LOT 10
SF=127,719
ACRES=2.93

PROPOSED LOT 1
SF=55,178
ACRES=1.27

EXISTING LOT A
SF=139,453
ACRES=5.52

EXISTING LOT C
SF=17,283
ACRES=0.40

PROPOSED LOT 2
SF=104,379
ACRES=2.40

EXISTING LOT B
SF=116,972
ACRES=2.69

PROPOSED LOT 5
SF=57,058
ACRES=1.31

PROPOSED LOT 15
SF=10,060
ACRES=0.23

PROPOSED LOT 4
SF=68,142
ACRES=1.56

4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15

PARCEL A
LANDS OF MAXON ALCO HOLDINGS, LLC

ALL that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, more particularly bounded and described as follows:

BEGINNING at a point in the southerly bounds of the Mohawk River at the intersection with the division line between the lands now or formerly of Legere Holdings, LLC as described in a deed filed in the Office of the Clerk of Schenectady County in Liber 1684 of Deeds at Page 306 to the west and the lands now or formerly of Maxon Alco Holdings, LLC to the east; **THENCE** along the southerly bounds of the Mohawk River the following eighteen (18) courses and distances:
1) N. 69° - 29' - 20" E., 86.25 feet to a point;
2) N. 55° - 59' - 50"E., 145.50 feet to a point;
3) N. 52° - 27' - 10"E., 158.13 feet to a point;
4) N. 49° - 54' - 40"E., 454.49 feet to a point;
5) N. 49° - 50' - 20"E., 157.77 feet to a point;
6) N. 38° - 20' - 50"W., 16.17 feet to a point;
7) N. 51° - 39' - 10"E., 60.00 feet to a point;
8) N. 38° - 20' - 50"W., 12.00 feet to a point;
9) N. 51° - 39' - 40"E., 56.01 feet to a point;
10) S. 38° - 20' - 50"E., 31.62 feet to a point;
11) N. 61° - 59' - 40"E., 600.28 feet to a point;
12) N. 70° - 06' - 50"E., 217.05 feet to a point;
13) N. 75° - 31' - 10"E., 132.75 feet to a point;
14) N. 78° - 41' - 20"E., 610.71 feet to a point;
15) N. 65° - 44' - 00"E., 328.75 feet to a point;
16) N. 51° - 49' - 10"E., 109.81 feet to a point;
17) N. 48° - 21' - 20"E., 69.77 feet to a point;
18) N. 38° - 01' - 40"E., 23.37 feet to a point in the westerly line of Maxon Road (also known as Maxon Road Arterial Highway);

THENCE along the westerly line of Maxon Road by the following three (3) courses:
1) S. 18° - 05' - 10" E., 110.78 feet to a point;
2) S. 28° - 40' - 50" W., 231.11 feet to a point;
3) S. 28° - 06' - 00" W., 175.82 feet to a point;

THENCE through the lands of Maxon Alco Holdings LLC by the following ten (10) courses:
1) S. 68° - 50' - 10" W., 227.13 feet to a point;
2) S. 68° - 31' - 58" W., 365.92 feet to a point;
3) S. 69° - 22' - 35" W., 202.92 feet to a point;
4) N. 89° - 30' - 41" W., 83.83 feet to a point;
5) S. 68° - 53' - 43" W., 133.57 feet to a point;
6) S. 68° - 49' - 05" W., 454.67 feet to a point;
7) N. 20° - 59' - 34" W., 40.13 feet to a point;
8) S. 69° - 00' - 26" W., 407.96 feet to a point;
9) S. 21° - 28' - 44" W., 315.76 feet to a point;
10) S. 67° - 51' - 46" W., 751.16 feet to a point the easterly line of lands now or formerly of Legere Holdings, LLC as described in a deed filed in the Office of the Clerk of Schenectady County in Liber 1684 of Deeds at Page 306; **THENCE** along said easterly line N. 20o-54-00"W., 187.35 feet to the **POINT AND PLACE OF BEGINNING.**

EXCEPTING THEREFROM A PARCEL OF LAND CONVEYED TO RENSSELAER POLYTECHNIC INSTITUTE BY deed filed in the Office of the Clerk of Schenectady County in Liber 1186 of Deeds at Page 188 SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING at a point in the lands of Maxon Alco Holdings LLC said **POINT OF BEGINNING** located as follows: **COMMENCING** at a point in the southerly boundary of the Mohawk River at its intersection with the westerly line of Maxon Road (also known as Maxon Road Arterial Highway); **THENCE** from said **POINT OF COMMENCMENT** S. 63° - 55' - 46" W., 818.70 feet to the first mentioned **POINT OF BEGINNING** which point is the **POINT OF BEGINNING** of the parcel herein described; **THENCE** through the first herein described parcel the following nine (9) courses and distances
1) S. 76° - 55' - 10" W., 165.95 feet to a point;
2) S. 12° - 15' - 05" E., 110.15 feet to a point;
3) N. 74° - 08' - 28" E., 69.13 feet to a point;
4) S. 35° - 18' - 17" E., 6.68 feet to a point;
5) N. 61° - 49' - 45" E., 19.69 feet to a point;
6) N. 67° - 25' - 03" E., 28.46 feet to a point;
7) N. 57° - 38' - 48" E., 26.14 feet to a point;
8) N. 47° - 54' - 28" E., 26.69 feet to a point
9) N. 12° - 40' - 49" W., 81.53 feet to the **POINT AND PLACE OF BEGINNING.**

SUBJECT to all easements, rights-of-way or restrictions of record.

PARCEL A CONTAINS 20.57± acres of land, more or less.

PARCEL B
LANDS OF MAXON ALCO HOLDINGS, LLC

ALL that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, more particularly bounded and described as follows:

BEGINNING at a point in the northerly boundary of the Front Street at its intersection with the easterly line of lands now or formerly of Legere Holdings, LLC as described in a deed filed in the Office of the Clerk of Schenectady County in Liber 1684 of Deeds at Page 306; **THENCE** along said the easterly line of lands now or formerly of Legere Holdings, LLC by the following four (4) courses:
1) N. 18° - 41' - 04" W., 16.44 feet to a point;
2) N. 30° - 42' - 22" W., 235.40 feet to a point;
3) N. 20° - 29' - 20" W., 93.46 feet to a point;
4) N. 20° - 54' - 00" W., 79.76 feet to a point;

THENCE through the lands of Maxon Alco Holdings LLC by the following ten (10) courses:
1) N. 67° - 51' - 46" E., 751.18 feet to a point
2) N. 21° - 28' - 44" E., 315.76 feet to a point;
3) N. 69° - 00' - 26" E., 407.96 feet to a point;
4) S. 20° - 59' - 34" E., 40.13 feet to a point;
5) N. 68° - 49' - 05" E., 454.67 feet to a point;
6) N. 68° - 53' - 43" E., 133.57 feet to a point;
7) S. 89° - 30' - 41" E., 83.83 feet to a point;
8) N. 69° - 22' - 35" E., 202.92 feet to a point;
9) N. 68° - 31' - 58" E., 365.92 feet to a point;
10) N. 68° - 50' - 10" E., 227.13 feet to a point;

THENCE through the lands of Maxon Alco Holdings LLC by the following thirteen (13) courses:
1) N. 40° - 30' - 40" W., 230.75 feet to a point on a curve having a radius of 860.00 feet;
2) thence southwesterly along a curve to the right having a radius of 860.00 feet for an arc distance of 160.10 feet, said arc being subtended by a chord having a bearing of S. 60° - 42' - 31" W. and a chord length of 159.87 feet;
3) S. 65° - 02' - 31" W., 101.64 feet to a point of curvature having a radius of 785.00 feet;
4) thence southwesterly along a curve to the right having a radius of 785.00 feet for an arc distance of 315.48 feet, said arc being subtended by a chord having a bearing of S. 77° - 33' - 18" W. and a chord length of 313.36 feet to a point of reverse curvature having a radius of 632.00 feet;
5) thence southwesterly along a curve to the left having a radius of 632.00 feet for an arc distance of 344.09 feet, said arc being subtended by a chord having a bearing of S. 73° - 28' - 16" W. and a chord length of 339.85 feet to a point of curvature having a radius of 632.00 feet to a point of tangency;
6) S. 57° - 52' - 26" W., 185.37 feet to a point of curvature having a radius of 485.00 feet;
7) thence southwesterly along a curve to the left having a radius of 485.00 feet for an arc distance of 67.47 feet, said arc being subtended by a chord having a bearing of S. 53° - 53' - 20" W. and a chord length of 67.41 feet;
8) S. 69° - 12' - 17" W., 5.74 feet to a point
9) S. 21° - 12' - 29" E., 2.05 feet to a point on a curve having a radius of 485.00 feet to a point;
10) thence southwesterly along a curve to the left having a radius of 485.00 feet for an arc distance of 22.11 feet, said arc being subtended by a chord having a bearing of S. 47° - 52' - 45" W. and a chord length of 22.11 feet to a point of curvature having a radius of 75.00 feet;
11) thence southeasterly along a curve to the left having a radius of 75.00 feet for an arc distance of 121.03 feet, said arc being subtended by a chord having a bearing of S. 50° - 25' - 40" W. and a chord length of 108.32 feet to a point of curvature having a radius of 1,310.46 feet;
12) thence southwesterly along a curve to the left having a radius of 1,310.46 feet for an arc distance of 107.92 feet, said arc being subtended by a chord having a bearing of S. 48° - 14' - 34" E. and a chord length of 107.89 feet to a point on a curve having a radius of 51.75 feet located in the northerly bounds of Front Street;

THENCE through the lands now or formerly Maxon Alco Holdings LLC, the following two (2) courses and distances:
1) N. 29° - 04' - 35" E., 11.56 feet to a point;
2) N. 69° - 17' - 41" E., 15.87 feet to a point;

THENCE along the lands now or formerly of S&T Operations LTD, as described in Liber 1796 Page 545 to the north and the herein described parcel to the south, N. 69° - 17' - 41" E., 253.93 feet to a point;

THENCE S. 23° - 33' - 20" E., 155.92 feet to a point in the northerly bounds of Maxon Road (also known as Maxon Road Arterial Highway);

THENCE along the northerly line of Maxon Road S. 66° - 26' - 40" W., 117.34 feet to a point;

THENCE along the northerly bounds of New York State Department of Transportation appropriation map known as Map 3 Parcel 4, N.69°19'55"W., a distance of 40.40 feet to a point on a curve having a radius of 51.75 feet

THENCE along the easterly line of Nott Street and curving to the left around the arc of said circular curve having a radius of 51.75 feet for an arc distance of 56.56 feet, said arc being subtended by a chord having a bearing of N. 65° - 49' - 18" W. and a chord length of 53.36 feet, to the point of tangency of said curve being a point in the north line of Front Street;

THENCE along the northerly line of Front Street by the following three (3) courses:
1) S. 62° - 52' - 00" W., 145.40 feet to a point;
2) S. 69° - 06' - 50" W., 242.51 feet to a point;
3) S. 71° - 29' - 20" W., 193.22 feet to the **POINT AND PLACE OF BEGINNING.**

SUBJECT to all easements, rights-of-way or restrictions of record.

PARCEL B CONTAINS 30.62± acres of land, more or less.

SF=10,060
ACRES=0.23
MOHAWK RIVER

PROPOSED LOT 4
SF=68,142
ACRES=1.56

4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

HERSHBERG & HERSHBERG
Consulting Engineers and Land Surveyors
18 Locust Street
Albany, New York 12203

ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, IS ILLEGAL

STATE OF NEW YORK · DANIEL R. HERSHBERG · 044226 · PROFESSIONAL ENGINEER & LAND SURVEYOR

REVISIONS

REMARKS	DATE
ADDED PARCEL 15	2-24-16
REMOVED EASEMENTS ADJUSTED LOT 7	3-7-16
GENERAL REVISIONS	3-8-16
METES AND BOUNDS SHARP	3-16-16
REVISIONS ASKED	3-30-16
COORD. PLANES	4-14-16

REMARKS	DATE
ADDED OVERALL BEARINGS	4-1-16
	6-8-16

DATE	REMARKS
12/01/08-SUB/MRC	
2/23/2016	
CHKD: DRH	
DET: SMC/C	
SCALE: AS NOTED	
FILE: 2012-0108-SUB	

SUBDIVISION PLAN
MOHAWK HARBOR
SCHENECTADY, NEW YORK

SUB-2