

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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December 20, 2017

811 Jefferson Road LLC
C/o Canandaigua National Bank & Trust, Co-Trustee
Attn: James F. Lieb, Group Mgr., Trust & Estate Services
1150 Pittsford Victor Road
Pittsford, New York 14534

**Re: Former A B Dick Facility #C828148
Site Management Plan, November 2017
Town of Henrietta, Monroe County**

Dear Mr. Lieb

The New York State Departments of Environmental Conservation (NYSDEC) and Health collectively referred to as the Departments, have completed a review of the Site Management Plan (SMP) dated November 2017 and prepared by Haley and Aldrich for the Former A B Dick Facility located in the Town of Henrietta. In accordance with 6 NYCRR Part 375-1.6, the SMP is hereby approved with the following modifications:

1. Section 2.3.6.2 Excavation: In the first paragraph, third sentence, a demarcation layer was placed at the site at 12 inches below ground surface to signify potential remaining contamination below the excavated area.
2. Section 7.1 Site Management Reports: In the second paragraph, the sentence should read, "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 annually or as otherwise determined by the Department* and summarized in the Periodic Review Report."
3. Figure 11: In the legend, the property line/site boundary also represents the easement and cover system boundaries as well.

Please manage activities at the site in accordance with the SMP. By **January 4, 2018**, please attach this letter and provide bound hardcopies of the SMP as follows:

- Danielle Miles (NYSDEC – Avon, 1 copy);
- The document repository at the Henrietta Public Library located at 455 Calkins Road, Henrietta, NY 14623

Thank you for your cooperation in this matter and please contact me at 585-226-5349 if you have any questions regarding the SMP.

Sincerely,



Danielle Miles, EIT
Assistant Engineer

ec:

Janice Szucs, Haley and Aldrich
James Siegfried, Haley and Aldrich
Glenn White, Haley and Aldrich
Thomas Walsh, Barclay Damon
Marshall Hardy, MJ Inc
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Former AB Dick Facility Site
MONROE COUNTY
TOWN OF HENRIETTA, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: BCP #C828148
USEPA ID # NYR000160143

Prepared for:

811 Jefferson Road, LLC
c/o Canandaigua National Bank & Trust
1150 Pittsford Victor Road
Pittsford, NY 14534

Prepared by:

Haley & Aldrich of New York
200 Town Centre Drive, Suite 2
Rochester, NY 14623
585.359.9000

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

NOVEMBER 2017

CERTIFICATION STATEMENT

I James E. Siegfried, P.E. certify that I am currently a NYS registered professional engineer as in defined in 6 NYCRR Part 375 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).



JAMES E. SIEGFRIED, P.E.

11.20.2017

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MONROE COUNTY
TOWN OF HENRIETTA, NEW YORK**

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LIST OF ACRONYMS

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BGS	Below Ground Surface
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
CO2	Carbon Dioxide
CP	Commissioner Policy
CVOC	Chlorinated Volatile Organic Compound
DCE	Dichloroethene
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
PCE	Tetrachloroethene
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
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SDS	Safety Data Sheet
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
TCE	Trichloroethene
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

ES 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: Brownfield Cleanup Program Site #C828148, Former AB Dick Facility Site, 811 Jefferson Road, Henrietta, New York 14623

Institutional Controls:	1. The property may be used for “Commercial Use” as defined in 6 NYCRR Part 375-1.8(g)(2)(iii) and/or “Industrial Use” as defined in 6 NYCRR Part 375-1.8(g)(2)(iv); and shall not be used for “Unrestricted Use” as defined in 6 NYCRR Part 375-1.8(g)(1)(i), “Residential Use” as defined in 6 NYCRR Part 375-1.8(g)(2)(i) and/or “Restricted-Residential Use” as defined in 6 NYCRR Part 375-1.8(g)(2)(ii).

Site Identification:

Brownfield Cleanup Program Site #C828148, Former AB Dick Facility Site, 811 Jefferson Road, Henrietta, New York 14623

2. The Environmental Easement provided in Appendix A which provides that:

- The use of groundwater underlying the Site is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe 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 New York State Department of Environmental Conservation (NYSDEC).
- 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.

	3. All ECs must be inspected at a frequency and in a manner defined in the SMP.
	4. Access and entry to the Affected Area of the Unither property to the south of the Area 2 ditch and around UCB MW-3 and MW-76 for the implementation of this SMP is granted to Participant by the Remedial and Site Management Access License made and entered as of May 4, 2016 by and between Unither Manufacturing, LLC, UCB Technologies, Inc. and Participant, a copy of which is provided in Appendix A.
	5. Prior to the construction of new structures on-site, a pre-construction soil vapor intrusion (SVI) evaluation will be performed or an SVI mitigation system will be installed as part of the new structure without first conducting an investigation, as described in Section 4.4 of this SMP.
	6. If changes observed in the long-term groundwater monitoring results warrant collection of additional environmental soil vapor intrusion data off-site on the Affected Area of the Unither property, an SVI evaluation will be performed for Unither Building 3, or an SVI mitigation will be installed in Unither Building 3 without first conducting an SVI evaluation, as described in Section 4.4 of this SMP.
	7. Prior to the construction of new structures located off-site on the Affected Area of the Unither property, SVI mitigation will be installed as an element of the building foundation without first conducting an investigation, and an appropriate SVI evaluation will be completed to confirm the system is operating effectively, in accordance with NYSDOH guidance, as described in Section 4.4 of this SMP.
Engineering Controls:	1. Cover system
Inspections:	Frequency
1. Cover inspection	Annually, except with respect to Area 2B which will be inspected monthly or when a rainfall event greater than 0.5 inches has occurred until sufficient vegetation for erosion and sedimentation control can be achieved

Monitoring:	
1. Groundwater Monitoring Program	Semi-annually
Reporting:	
2. Periodic Review Report	Annually

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

INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Former AB Dick Facility Site located in Henrietta, 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) Site No. C818148 which is administered by New York State Department of Environmental Conservation (NYSDEC).

811 Jefferson Rd LLC (Participant) entered into a Brownfield Cleanup Agreement (BCA), on 5 October 2007 with the NYSDEC to remediate the Site. 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, some 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 Monroe 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 Index # B8-0745-07-06, Site #C828148 for the site, and thereby subject to applicable penalties.

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 Haley & Aldrich of New York, on behalf of 811 Jefferson Road, 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 will 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. Revisions can also be requested by the NYSDEC. 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 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 I on the following page 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.

Table I: Notifications*

Name	Contact Information
Danielle Miles, NYSDEC Project Manager	Division of Environmental Remediation NYSDEC, Region 8 6274 East Avon-Lima Rd Avon, NY 14414 (585) 226-5349 danielle.miles@dec.ny.gov
Andrew Guglielmi, Esq.	Office of General Counsel NYSDEC 625 Broadway Albany New York 12233-5500
Site Control Section	Division of Environmental Remediation NYSDEC 625 Broadway Albany, NY 12233
Mark Sergott	New York State Department of Health Bureau of Environmental Exposure Investigation Empire State Plaza Corning Tower Room 1787 Albany, NY 12237 (518)402-7860 beei@health.ny.gov

* Note: Notifications are subject to change and will be updated as necessary. Whenever notice to NYSDEC (other than the annual certification) is required, the party providing such notice shall identify the Controlled Property by referencing the following information: “Former AB Dick Facility Site; County: Monroe County; NYSDEC Site Number: C828148; Brownfield Cleanup Agreement Index : B8-0745-07-06; and Monroe County tax map number 162.09-1-3.”

SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The Site is located in Henrietta, Monroe County, New York and is identified as Section 162.9 Block 1 and Lot 3 on the Monroe County Tax Map. The Site is an approximately 12.2-acre area and is bounded by Jefferson Road to the north, Unither Manufacturing, LLC (Unither) to the south and west, and Clay Road to the east (see Figure 2 – Site Plan). The boundaries of the Site are more fully described in Appendix A – Environmental Easement. The owner(s) of the Site parcel(s) at the time of issuance of this SMP is/are: 811 Jefferson Road, LLC.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of an undeveloped lot. The Site is zoned industrial (allowing for use of the property as commercial and/or industrial) and it is currently vacant.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include commercial properties. The properties immediately south and west of the Site include industrial properties (Unither Manufacturing, LLC.); the properties immediately north of the Site include commercial properties; the properties immediately east of the Site include commercial and residential properties.

2.2.2 Geology

The Site is relatively flat and slopes gently down to the west. Regional mapping of overburden geology indicates that the Site is underlain by glacial till, with lacustrine sediments. The Site is located on a topographic high within a till plain feature located at or just above the margins of a former glacial lakebed that deepen gradually to the west and south. Site soils consist of several feet of fill material followed by red-brown upper

glacial till to a depth of approximately 17 ft bgs. Below the upper glacial till are gray-brown silts and clay glacial till down to approximately 57 ft bgs. A clayey unit with some silt is present from approximately 57 ft bgs to approximately 64 ft bgs. The thickness of the overburden soils overlying competent shale bedrock beneath the Site is estimated to extend to approximately 70 to 76 ft bgs.

The groundwater-bearing units beneath the Site consist of interbedded silty sand, silts and clays. The vadose zone extends to approximately 5 ft bgs and consists of clayey silt.

2.2.3 Hydrogeology

Groundwater generally occurs within 1 to 5 ft bgs. The topographic high is a drainage divide between the Red Creek/Genesee River watershed on the west and the Allen Creek/Irondequoit Creek watershed on the east. The position on a drainage divide is reflected in the water table elevations measured at the Site, which indicate that shallow groundwater flows radially toward the north, east, south and west from water table high points in the center of the Site. However, Site topography and engineered surface water drainage features combine to direct stormwater runoff from all but a small portion of the northeast corner of the Site to the western side of the divide.

A groundwater contour map is shown in Figure 3. Groundwater elevation data is provided in Table II. Groundwater monitoring well construction logs are provided in Appendix C.

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.

2.3.1 Past Use and Ownership

Between 1955 and 2005 the Site was used to manufacture photocopy imaging equipment. Operators included the AB Dick Company, Itek Corporation, Photostat Corporation, and Silver Acquisition Corp, Inc. (also known as ABDI International, Inc.). Past operations that appear to have led to Site contamination include chemical stripping, material storage including an underground storage tank, and discharges to drainage ditches.

In 1971, AB Dick notified the Town of Henrietta that industrial wastewater that should have gone to the sanitary sewer was discharged to a storm sewer catch basin.

In 1998, contaminated soil was encountered during removal of an underground concrete tank that was connected to a floor drain in the building's hazardous material storage room. The former tank was located adjacent to the south wall of the hazardous materials storage room addition at the southwest corner of the facility building. A spill notification was submitted to the Department. AB Dick completed a follow-up subsurface investigation in 1998 and determined that residual subsurface impacts from the release at the tank appeared to be limited to the top two feet of soil and in the immediate area of the tank excavation. Impacted soils were excavated, and the spill was closed.

2.3.2 Site Features

Previously, the main Site features included an asphalt parking lot and an approximately 167,200 sq. ft. slab on grade building that was constructed in 1955-1956 with additions in 1968 and 1979. The building was demolished, and all waste and demolition debris were removed in early 2007. A portion of the former building slab and a contiguous portion of the asphalt parking lot pavement, which together cover about 3 acres in the southwest corner of the Site, were left in place. An approximately 0.3-acre strip of land, purchased by the Participant in 2017, contains a stormwater drainage ditch which the former AB Dick Company discharged contaminants. The remainder of the Site is grass covered.

2.3.3 Remedial Investigation

Stantec Consulting Services Inc. (Stantec) conducted a Remedial Investigation (RI) in 2008 and a Supplemental RI in 2010 to characterize the nature and extent of the contamination. Both the Revised RI Report (Stantec, October 2010) and the Supplemental RI Report (Stantec, October 2010) that delineated the on-Site and off-Site environmental conditions were approved by the Department in November 2010. The RI and Supplemental RI identified impacts to soil and groundwater from a number of constituents related to former activities at the Site. As summarized in the NYSDEC's Decision Document (Decision Document; NYSDEC, 2016) for the Site, based on the results of the RI, the following were identified as contaminants of concern at this Site:

silver

cadmium

copper

zinc

benzo(b)fluoranthene

benzo(a)pyrene

benzo[k]fluoranthene

dibenz[a,h]anthracene

indeno(1,2,3-CD)pyrene

PCB aroclor 1254

xylene (mixed)

toluene

trichloroethene (TCE)

tetrachloroethene (PCE)

ethylbenzene

1,1 dichloroethene

vinyl chloride

The two primary areas of concern were identified at the Site as Area 1 and Area 2. Area 1 is located near the southwest corner of the former building in the vicinity of industrial cleaning operations, storage areas including a former underground tank, and sub-floor piping. Area 2 is the drainage ditch located at the southern boundary of the Site. The ditch collects stormwater runoff from the central, south and west portions of the Site. Roof drains from the former building were also piped to this ditch. The primary contaminants of concern for Area 1 include the non-chlorinated VOCs xylene, and ethylbenzene and the chlorinated VOCs trichloroethene (TCE) and tetrachloroethene (PCE). The primary contaminants of concern for Area 2 include chlorinated VOCs, several poly-aromatic hydrocarbons (PAHs) (benzo(b)fluoranthene, benzo(a)pyrene, benzo[k]fluoranthene, dibenz[a,h]anthracene and indeno(1,2,3-CD)pyrene), PCB aroclor 1254, and several metals (cadmium, copper, silver and zinc).

Area 1 Soil – The non-chlorinated VOCs were found in shallow soil while the chlorinated VOCs were found in both the shallow and deeper soils. Concentrations of xylene found in Area 1 (up to approximately 1,100 ppm) significantly exceeded the soil cleanup objective (SCO) for unrestricted use (0.26 ppm). Concentrations of toluene found on in Area 1 (up to approximately 5 ppm) moderately exceeded the SCO for unrestricted use (0.7 ppm). Concentrations of ethylbenzene found in Area 1 (up to approximately 230 ppm) significantly exceeded the SCO for unrestricted use (1 ppm). Concentrations of TCE found in Area 1 (up to 1,400 ppm) significantly exceeded the SCO for unrestricted use (0.47 ppm). Concentrations of PCE found in Area 1 (up to 16 ppm) moderately exceeded the SCO for unrestricted use (1.3 ppm).

Area 1 Groundwater – Chlorinated and non-chlorinated VOCs were also found in groundwater significantly exceeding groundwater standards (typically 5 ppb), with a maximum total non-chlorinated VOC concentration of about 5,300 ppb and a maximum

total chlorinated VOC concentration of 669,000 ppb. Chlorinated VOCs were estimated to have migrated about 300 feet downgradient to the west to the area of the Unither property around MW-76 and UCB-MW-3 near the property boundary. The non-chlorinated solvents do not appear to have migrated significantly beyond the source area. Vertically, significant groundwater impacts were present to depths of 77 feet below ground. Chlorinated VOCs were not detected in an off-site downgradient well located approximately 50-ft from the Site boundary.

Area 2 Soil – The PCBs, PAHs, and metals were found in shallow soil while the chlorinated VOCs were found in both the shallow and deeper soils. Concentrations of TCE found in Area 2 (up to 6,900 ppm) significantly exceeded the SCO for unrestricted use (0.47 ppm). Concentrations of PCE found in Area 2 (up to 28 ppm) moderately exceeded the SCO for unrestricted use (1.3 ppm). Concentrations of PCBs found in Area 2 (up to approximately 7 ppm) moderately exceeded the SCO for unrestricted use (0.1 ppm). Concentrations of cadmium found on in Area 2 (up to approximately 55 ppm) moderately exceeded the SCO for unrestricted use (2.5 ppm). Concentrations of copper found in Area 2 (up to approximately 803 ppm) moderately exceeded the SCO for unrestricted use (50 ppm). Concentrations of silver found in Area 2 (up to approximately 91 ppm) moderately exceeded the SCO for unrestricted use (2 ppm). Concentrations of several PAHs in Area 2 exceeded the SCO for unrestricted use (typically 1 ppm) with a maximum total PAH concentration of approximately 369 ppm.

Area 2 Ditch Water – The drainage ditch does not contain continuously flowing water. Rather, there are areas where the water pools between precipitation events. Surface water samples from the drainage ditch indicated the potential presence of several metals exceeding Class D surface water standards. Concentrations of cadmium (up to approximately 18 ppb) moderately exceeded the Class D surface water standard (9.2 ppb). Concentrations of copper (up to approximately 354 ppb) moderately exceeded the Class D surface water standard (28 ppb). Concentrations of silver (up to approximately 22 ppb) moderately exceeded the Class D surface water standard (16 ppb). Concentrations of zinc (up to approximately 1,970 ppb) moderately exceeded the Class D surface water standard (160 ppb). Results from a subsequent surface water sampling event for these metals, however, did not exceed any of the surface water standards.

Area 2 Groundwater – Chlorinated VOCs associated with Area 2 were also found in groundwater significantly exceeding groundwater standards (typically 5 ppb), with a maximum total chlorinated VOC concentration of 890,000 ppb. Chlorinated VOCs have migrated from the drainage ditch about 140 feet down-gradient to the southwest. The drainage ditch is located on-Site with additional impacted groundwater located off-site on a portion of the Unither property bounded on the west by the eastern face of Unither Building 3, on the north by the common boundary line between the Site and the Unither property, on the east by Clay Road, and on the south by a line one hundred and ninety feet (190') to the south of and paralleling the current common boundary line ("Affected Area"). Vertically, slight groundwater impacts were present to depths of 74 feet below ground.

Soil Vapor – The RI program included an assessment of the potential for vapor intrusion by VOC-containing soil vapor. That vapor intrusion assessment did not indicate a significant potential for such conditions to exist. This conclusion was confirmed by indoor air sampling conducted by Participant at the nearest building located on the Unither property, i.e., Unither Building 3, based on an Indoor and Outdoor Air Sampling Program Work Plan (Haley & Aldrich, 2015) conditionally approved by the Department in conjunction with the NYS Department of Health by letter dated 4 March 2015.

2.3.4 Soil Removal IRM

Prior to the issuance of the Decision Document, the petroleum containing soils were addressed to the satisfaction of the Department in an Interim Remedial Measure (IRM; Haley & Aldrich, 2013). In April 2013, approximately 29 tons of soil and asphalt debris were excavated from a small area where soil was stained and had a petroleum odor. The excavation area (Area 3) was located in the eastern portion of the Site and about midway north to south. Excavated material consisted of fill soils along with asphalt debris and a distinct buried asphalt layer likely the result of prior Site development and various building/infrastructure modifications. Confirmation samples from the sides and bottom of the excavation met Unrestricted Use SCOs. The excavated material was properly disposed of off-site and the excavation was backfilled with clean fill.

In addition, an 8-inch cast iron pipe was uncovered in the excavation. Historical drawings indicate that this pipe may have been associated with roof drains from the former

building. Liquid in the pipe was tested and was not impacted. The pipe penetration was plugged with bentonite. Three test pits were completed along the pipe to further assess pipe conditions. Soil samples collected from the test pits met Unrestricted Use SCOs.

2.3.5 Alternatives Analysis

An Alternatives Analysis Report (AAR; Haley & Aldrich, 2013) was prepared to document the remedial action alternatives analysis process and the Site management planning necessary to attain and maintain conditions protective of public health and the environment for the current and reasonably anticipated commercial/industrial use of the Site. The remedy selected to address the contaminants of concern in and downgradient of Area 1 and Area 2 at the Site is documented in the Department's Decision Document.

The selected remedy was a Track 4: Restricted use with site-specific soil cleanup objectives remedy. The selected remedy included excavation and off-site disposal of contaminant source area soils and injection of remediation amendments to treat residual source and groundwater impacts.

2.3.6 Remedial Actions

Remedial actions were implemented during the spring of 2017 in accordance with the Remedial Action Work Plan (RAWP; Haley & Aldrich, 2017) and are reported in the Final Engineering Report (FER; Haley & Aldrich, 2017).

2.3.6.1 ISCR Injection

Per the RAWP, remedial injections of in-situ chemical reduction (ISCR) amendment were performed at the Site and the Affected Area of the Unither property to the south of the Area 2 ditch between March 27 and May 26, 2017. The materials injected included ISCR reductant zero valent iron (ZVI), emulsified vegetable oil (EVO), and emulsified zero valet iron (EZVI). Injections began at on-site Area 1B. More than the amount of EVO estimated in the RAWP was delivered to the Area 1B target zone. ZVI and EVO were injected into Area 1A in the amount estimated in the RAWP. The amount of EVO estimated in the RAWP was delivered to the Area 1C target zone.

Off-site in the vicinity of MW-54 in the Affected Area on the Unither property, the amount of EVO and ZVI estimated in the RAWP was delivered to the target zone.

Prior to the start of injections in the Unither access road, TCE dense non-aqueous phase liquid (DNAPL) was discovered in monitoring well MW-38 which is located on the south side of the on-site Area 2 ditch directly across from the outlet of the stormwater pipe from the former AB Dick facility. Because of the presence of DNAPL, a more robust ISCR designed for DNAPL destruction, EZVI, was used. In addition, the planned line of 5 injection points along the south edge of the access road was supplemented with a second line of 7 injection points near the middle of the road (and closer to the location of the DNAPL detection). Injections were halted after observations of surfacing of EZVI occurred at previously closed injection points in the road, through the annular space of active injection points, in the Area 2 ditch through various points on the south slope, and around the road boxes of the monitoring wells on the south side of the ditch, and MW-38 was inadvertently filled with EZVI via injections located 10 to 15 feet away. In total, 1,991 gallons of the more robust EZVI was injected in lieu of the 500 gallons of EVO and 800 pounds of ZVI reagents planned in the RAWP. Approximately 796 gallons of vegetable oil and 1,792 pounds of iron were delivered through the application of EZVI. The amounts of vegetable oil and iron were calculated from the percentages of each in the EZVI product. According to the safety data sheet (SDS), the technical specification sheet, and the vendor, EZVI is approximately 40% vegetable oil, 10% iron and 50% emulsifiers and water by volume.

In the on-site Area 2 ditch, EZVI was also used due to its proximity to the DNAPL observed in MW-38 in lieu of the planned 995 gallons of EVO and 1,950 pounds of ZVI estimated in the RAWP. A line of 5 planned injection points along the north edge of the Unither access road as originally planned was supplemented with 3 additional points placed between the original injection points to reduce the radius of influence required for better coverage of the target zone. In addition, a second line of 4 points in the middle of the ditch as originally planned was supplemented with an additional point on the north side of the ditch. Injections continued until surfacing of EZVI was observed seeping out of small cracks within the access road, at previous injection points on the south side of the ditch and inside of the road box of MW-62 (at elevations up to 7 feet above the bottom of the ditch). In total, 1,219 gallons of EZVI, which is approximately 488 gallons of EVO and 1,098

pounds of ZVI, were injected through the thirteen injection points which was somewhat less than the amount of oil and iron planned in the RAWP.

The ISCR injection program using EZVI was expanded across the entire Unither Access Road / Area 2 ditch in recognition that it was a single target treatment zone. Therefore, emphasis was placed on injecting in the two lines of points in the Unither Access Road and the southern line of Area 2 points (north edge of the Unither Access Road) to maximize delivery of EZVI to the target zone containing the greatest concentrations of contaminants of concern.

2.3.6.2 Excavation

In Area 1, impacted soils were excavated to up to 10 ft bgs, and 367.75 tons of soils co-mingled with concrete was removed and disposed at approved disposal facilities. Excavation confirmation sample results were below Restricted Use Commercial SCOs. Confirmation sample results are summarized in Table III and locations are shown on Figure 4. A demarcation layer was placed at 12 inches bgs because the area was finished with a soil/gravel cover. The excavation was backfilled with clean imported gravel and on-site soil with concentrations below Restricted Use Commercial SCOs and approved for reuse by NYSDEC. The surface was restored to grade and finished with clean imported gravel.

In Area 2, impacted soils were excavated within the storm water drainage ditch from between 1 to 5 ft bgs, and 828.96 tons of soils was removed and disposed off-site at approved disposal facilities. Excavation confirmation sample results were below Restricted Use Commercial SCOs. Confirmation sample results are summarized in Table III and locations are shown on Figure 5. A demarcation layer was placed 12 inches bgs in Area 2B because the area was finished with a soil cover, and the past presence of DNAPL in the groundwater quality sample from MW-38 indicates that TCE may still be present at depth. In accordance with the RAWP, an ISCR amendment was mixed into the bottom two to three feet of the excavation prior to backfilling the excavation with clean imported gravel. The surface was restored with clean imported top soil and seeded.

Due to the onset of cold weather conditions after placement of the demarcation layer and replacement of 12 inches of clean backfill, sufficient vegetation stabilization in Area 2B may not be reached until Spring 2018. Until sufficient vegetation for erosion and

sedimentation control can be achieved, inspections of the cover soil will be performed monthly or when a rainfall event greater than 0.5 inches has occurred. Repair of the cover soil layer will be implemented if erosion damage is noted during inspection. Once sufficient vegetation stabilization in Area 2B has been achieved, the NYSDEC will be notified and termination of these inspections will be requested.

2.3.6.3 Post Remediation Groundwater Monitoring

A performance groundwater monitoring program was implemented in accordance with the RAWP to monitor the effectiveness of the ISCR amendment injections and the remedial excavations. Before the implementation of the ISCR injections and excavation, a pre-remediation groundwater sampling event was completed in March 2017 to compile baseline groundwater concentrations from the performance groundwater monitoring well network established in the RAWP (see Figure 6). The monitoring network included wells within the Area 1A and Area 2 source areas, in Areas 1B and 1C, and in areas upgradient, downgradient, and cross-gradient of Area 1 and Area 2.

Post-remediation groundwater sampling events occurred in July, August and September 2017. As required by the RAWP, analyses included chlorinated volatile organic compounds (CVOCs), such as cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), PCE, TCE, vinyl chloride, and geochemical parameters, total organic carbon (TOC), sulfate, total and dissolved iron, ethene and chloride. Nineteen wells were sampled including five replacement wells (MW-1IR, MW-2R, MW-8R, MW-22R, and MW-27R) which were replaced between the March baseline and the first post-remedial sampling event due to well integrity, well construction or well placement within excavation limits.

Performance monitoring wells were: MW-1R, MW-2R, MW-5DR, MW-8R, MW-22R, MW-27R, MW-38, MW-54, MW-55, MW-58, MW-62, MW-63, MW-69, MW-70, MW-74, MW-76, MW-77, MW-78, and UCB-MW-03. The performance groundwater monitoring network and a posting map summarizing detections of CVOCs are shown on Figure 7. Performance groundwater sampling results are summarized on Table VI.

Groundwater sampling results from the performance wells showed evidence of reductive dechlorination following ISCR injection activities in Areas 1A, 1B, 1C, Area 2 and the

Affected Area on the Unither property. The data provided multiple lines of evidence that the quality of the groundwater in and around the performance wells was being positively affected by the injections, i.e., that reductive dechlorination was accelerated and was progressing to completion. This was shown by a decrease in TCE concentrations and/or an increase in concentrations of breakdown products cis-1,2-DCE and vinyl chloride. The presence of ethene also indicated reductive dechlorination was progressing to completion; ethene degrades quickly and would not likely be detected if it was not being constantly produced. Results from sentinel wells located outside and downgradient of the ISCR injection areas indicated stable CVOC concentrations.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated October 2017 are as follows:

2.5 Groundwater

2.5.1 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.

2.5.2 RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

2.6 Soil

2.6.1 RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

2.6.2 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.

2.7 Soil Vapor

2.7.1 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.

2.8 Remaining Contamination

2.8.1 Soil

Refer to Section 2.3 for a summary of the remedial activities performed to remove source area impacted soils and reduce the contaminant source where removal was not feasible. Figure 8 summarizes areas on-site below the cover that potentially exceed the Commercial Use SCOs at the Site, and off-site locations within the Affected Area on the Unither property to the south of the Area 2 ditch where contaminants of concern potentially exceed the Unrestricted Use SCOs after completion of remedial action. Remaining contamination in Area 1A and Area 2 are presented in Figure 9 and Figure 10.

2.8.2 Groundwater

Post-remediation groundwater performance monitoring results are discussed in Section 2.3.6.3. As of the last groundwater monitoring event completed during September 2017, TCE concentrations in groundwater within Area 1 were below 5 ug/L with the exception of MW-1IR, which was 580,000 ug/L. MW-1IR is within the design radius of influence of the targeted ISCR injection zone and therefore is anticipated to decrease in the future. Area 2 TCE concentrations were 2.7 ug/L at MW-63 and 3.9 ug/L at MW-5DR. Off-site TCE concentrations ranged from 0.26 at UCB-MW-3 to 5,600 ug/L at MW-54. Refer to Table IV and Figure 7 for a summary of groundwater analytical results.

2.8.3 Soil Vapor

Although the Site, itself, is presently undeveloped, future commercial or industrial redevelopment of the Site consistent with the BCA and applicable municipal zoning is anticipated, and future redevelopment of the Affected Area of the Unither property to the south of the Area 2 ditch in the area impacted by contaminants of concern may occur consistent with applicable municipal zoning. Although the RI program (Stantec, 2010) did not indicate a significant potential for vapor intrusion to exist, the potential for soil vapor intrusion will be evaluated for any proposed building to be constructed on the Site or on the Affected Area of the Unither property to the south of the Area 2 ditch in the area impacted by contaminants of concern. Alternatively, soil vapor intrusion mitigation control(s) may be installed as part of the building's construction.

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) and the ISCR/Excavation Performance Monitoring Plan (as provided in Section 4.0), 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

A series of ICs is required by the Decision Document 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 commercial and/or

industrial uses only. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. Access and entry to the Affected Area of the Unither property to the south of the Area 2 ditch and around UCB MW-3 and MW-76 for the implementation of this SMP is granted to Participant by the Remedial and Site Management Access License made and entered as of May 4, 2016 by and between Unither Manufacturing, LLC, UCB Technologies, Inc. and Participant, a copy of which is provided in Appendix A. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

- The property may be used for: commercial and/or industrial 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 Monroe 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 NYSDEC.
- 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; and

- The Site shall not be used for “Unrestricted Use” as defined in 6 NYCRR Part 375-1.8(g)(1)(i), “Residential Use” as defined in 6 NYCRR Part 375-1.8(g)(2)(i) and/or “Restricted-Residential Use” as defined in 6 NYCRR Part 375-1.8(g)(2)(ii)

3.3 Engineering Controls

3.3.1 Cover

Exposure to remaining contamination at the Site is prevented by a cover system. This cover system is comprised of a minimum of 12 inches of soil, asphalt pavement, and/or concrete (former building slabs). Any Site redevelopment will maintain a Site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the Site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Figure 11 presents the site wide cover system.

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.

The EWP is also relevant and appropriate for application to any excavation that will disturb the saturated subsurface soils on the Unither property south of the Area 2 ditch. The incremental cost and expense of any subsurface work on the Affected Area of the Unither property south of the Area 2 ditch in accordance with the EWP and as required by the Department, including but not limited to sampling, off-site soil/fill disposal, groundwater containerization and disposal, etc., shall be at the cost and expense of the Site’s Owner and/or Remedial Party, as those terms are defined in Appendix J, entitled “RESPONSIBILITIES of OWNER and REMEDIAL PARTY (collectively, the “Site Owner”).

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.

3.3.2 Potential SSDS

Although the RI program (Stantec, 2010) did not indicate a significant potential for vapor intrusion to exist, the potential for soil vapor intrusion will be evaluated for any building to be constructed on the Site or on the Affected Area of the Unither property to the south of the Area 2 ditch in the area impacted by the plume of contaminants of concern. The evaluation will be performed in accordance with a NYSDEC- and NYSDOH-approved soil vapor intrusion assessment work plan developed in general conformance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. An alternative would be to install a soil vapor intrusion mitigation system (i.e. sub-slab depressurization system [SSDS]) as a preventative measure as part of the building's construction without first performing a soil vapor intrusion assessment. With respect to any building to be constructed on the Affected Area of the Unither property south of the Area 2 ditch, a SSDS will be installed in such building, and an appropriate SVI evaluation will be completed to confirm the system is operating effectively, in accordance with NYSDOH guidance. The incremental cost and expense of installing, testing, monitoring, operating and maintaining a SSDS in such new building shall be at the cost and expense of Site Owner. Any SSDS installed would become an Engineering Control subject to development of an NYSDEC-approved operation and maintenance plan for incorporation into this Site Management Plan, assessment for conformance to the operation and maintenance plan and certification included in the Periodic Review Report for the Site.

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, soil vapor, indoor air, outdoor ambient air, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil and the Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006, as amended by the Soil Vapor/Indoor Air Matrices A, B and C dated May 2017, (collectively, the “SVI Guidance”) of the New York State Department of Health (NYSDOH); 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;
- 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 or at a minimum of once per year. 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.

Inspections of all remedial components installed at the Site will be conducted. 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;
- Achievement of remedial performance criteria; and

- 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 Performance Monitoring and Sampling

Samples shall be collected from on-site and off-site within the Affected Area on the Unither property to the south of the Area 2 ditch and around UCB MW-3 and MW-76 on the Unither property on a routine basis. Sampling locations, required analytical parameters and schedule are provided in Table V Post – ISCR/Excavation Remedy Performance Sampling Requirements and Schedule below. Groundwater elevations will be recorded during each groundwater sampling event. Modification to the frequency or sampling requirements will require approval from the NYSDEC.

The purpose of the post remediation groundwater monitoring is to assess the performance and effectiveness of the remedy. The performance and effectiveness of the remedy shall be evaluated at three years after implementation of the injection (the estimated longevity of the ISCR remedial amendments injected is three years) and annually thereafter. A minimum of three years of prior groundwater monitoring data will be used to evaluate trends in the remaining COC concentrations. No further remedial action on the Site would be warranted if the long-term trend of the remaining COC concentrations is

stable at a level acceptable to the NYSDEC, decreasing, or indicative of accelerated contaminant reduction and COC migration offsite is not increasing to the satisfaction of the NYSDEC. If the long-term trend of the remaining COC concentrations on-site is not stable, decreasing, or indicative of accelerated contaminant reduction, and COC migration off-site is increasing, additional remedial measures including, but not necessarily limited to, additional injection(s) of remedial amendments in a specific area(s) will be evaluated.

Off-site in the Affected Area of the Unither property to the south of the Area 2 ditch, no further remedial action would be warranted if the long-term trend of the remaining COC concentrations is decreasing to the satisfaction of NYSDEC. If the long-term trend of the remaining COC concentrations in the Affected Area of the Unither property to the south of the Area 2 ditch is not decreasing, additional injection(s) of remedial amendments in a specific area(s) will be evaluated and (provided further reduction of contaminant concentrations is feasible) would be implemented. If asymptotic contaminant reduction trends are realized at a concentration level(s) satisfactory to NYSDEC, no further injection will be implemented.

Table V – Long-Term Monitoring and Sampling Requirements and Schedule

	Wells Required to Assess Performance of ISCR and Excavation Remedy	Additional Wells Required per Unither Access Agreement	
Monitoring Wells Included	• MW-1IR • MW-2R • MW-3I • MW-4I • MW-6I • MW-8R • MW-28 • MW-33 • MW-38 • MW-62 • MW-63 • MW-69 • MW-70 • MW-74	• MW-5DR • MW-54 • MW-55 • MW-58 • MW-76 • MW-77 • MW-78 • UCB-MW-3	Semi-annually
Field Parameters	• ORP	• ORP	

	• DO • pH • Temperature • Specific Conductivity • Water Levels	• DO • pH • Temperature • Specific Conductivity • Water Levels	
Laboratory Analysis	• VOCs (8260B, full target compound list) • Total and dissolved iron (6010) • Sulfate (SM 4500 CL-E) • TOC (SM5310C) • Ethene • Chloride	• VOCs (8260B, full target compound list)	

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 Groundwater Sampling

Groundwater quality monitoring will be performed semi-annually to assess the performance of the ISCR/Excavation remedy on the Site and on the Affected Area. Modification to the frequency or sampling requirements will require approval from the NYSDEC. Groundwater monitoring will include DNAPL monitoring to the extent feasible of MW-5DR, MW-38, MW-54, MW-62, MW-63, MW-77 and MW-78. Groundwater monitoring will continue on the Affected Area of the Unither property to the south of the Area 2 ditch per the frequency and sampling requirements approved by the NYSDEC until long-term trends indicate asymptotic level(s) at low concentrations satisfactory to NYSDEC.

The network of monitoring wells has been installed to monitor upgradient, on-site and downgradient groundwater conditions at the Site. The network of on-site and off-site wells has been designed based on the following criteria: pre-remedial extent of contaminants of concern; location of injection points and amendments injected; limits of remedial excavation; and cleanup goals.

Figure 6 shows the monitoring well network. Table VI 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, 10 on-site wells, and 10 off-site/perimeter wells are sampled to evaluate the effectiveness of the remedial system.

Table VI – Monitoring Well Construction Details

Monitoring Well ID	Well Location/ Purpose	Coordinates (longitude/ latitude)	Well Diameter (inches)	Elevation (above mean sea level)			
				Casing	Surface	Screen Top	Screen Bottom
MW-1I-R	On-site/ Former Source Area	1125702.412 N 1405701.112 E	2	554.58	555.28	530.58	520.58
MW-2R	On-site/ Former Source Area	1125659.487 N 1405730.267	2	554.60	554.85	547.10	537.10
MW-3I	On-site/Down Gradient	1125576.213 N 1405741.363 E	2	553.65	554.17	529.65	519.65
MW-4I	On-site/ Down Gradient	1125679.344 N 1405632.498 E	2	553.26	553.79	529.26	519.26
MW-5DR	On-site/Perimeter	1125432.6 N 1405790.7 E	2	553.8	553.4	490.3	480.3
MW-6I	On-site/Up Gradient	1125770.08 N 1405763.03 E	2	554.79	555.34	530.59	520.50

MW-8R	On-site/ Up Gradient	1125683.4 N 1405799.7 E	2	555.28	555.34	548.28	538.28
MW-28	On-site/ Down Gradient	1125593.249 N 1405738.296 E	2	554.02	554.12	548.02	543.02
MW-33	On-site/ Down Gradient	1125696.443 N 1405614.459 E	2	552.82	553.36	549.82	539.82
MW-38	On-site/ Perimeter	1125432.848 N 1405812.808 E	2	553.51	553.98	541.51	531.51
MW-54	Off-site	1125375.703 N 1405734.423 E	2	545.02	545.46	543.02	533.02
MW-55	Off-site	1125278.762 N 1405668.29 E	2	544.03	544.58	542.03	532.03
MW-58	Off-site	1125378.421 N 1405622.897 E	2	543.74	544.24	541.74	531.74
MW-62	On-site/ Perimeter	1125433.4 N 1405852.8 E	2	553.89	554.52	545.89	539.82
MW-63	On-site/ Perimeter	1125430.37 N 1405732.48 E	2	552.91	553.33	539.91	529.91
MW-69	On-site	1125465.57 N 1405607.79 E	2	551.66	552.05	548.66	538.66
MW-70	On-site	1125465.5 N 1405441.27 E	2	548.99	549.26	545.79	535.79
MW-74	On-site	1125617.936 N 1405495.739 E	2	550.55	551.11	547.55	537.55
MW-76	Off-site	1125636.16 N 1405370.78 E	2	548.73	549.2	530.23	520.23

MW-77	Off-site	1125330.75 N 1405645.34 E	2	543.87	544.1	532.87	522.87
MW-78	Off-site	1125325.44 N 1405647.80 E	2	543.86	544.1	520.86	510.86
UCB-MW-3	Off-site	1125687.419 N 1405749.152 E	1	554.60	554.84	549.60	539.60

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

If biofouling or silt accumulation occurs in the on-site and/or off-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.

Monitoring wells will be inspected on an annual basis. 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.

4.4 Soil Vapor Intrusion Sampling

In recognition that residual levels of COCs may be present in Area 1 and Area 2 and off-site saturated soils on the Affected Area of the Unither property to the south of the Area 2 ditch at concentrations which exceed the applicable SCOs, prior to the construction of new structures located on-site, consideration of potential soil vapor intrusion (SVI) impact will be conducted to entail either: a) performance of a pre-construction SVI evaluation within the proposed building area to determine the potential for SVI concern to exist that may require mitigation measures to eliminate potential exposures to vapors in the proposed structure, or b) that SVI mitigation is installed as an element of the building foundation without first conducting an investigation.

If changes observed in the long-term groundwater monitoring results warrant collection of additional environmental data, either of the following will be implemented on the Affected Area of the Unither property: a) sub-slab and indoor/outdoor monitoring and sampling of Unither Building 3, or b) installation of SVI mitigation in Unither Building 3 without first conducting sub-slab and indoor/outdoor monitoring and sampling. The incremental cost and expense of sub-slab and indoor/outdoor monitoring and sampling of Unither Building 3, or installing, testing, monitoring, operating and maintaining a SSDS in Unither Building 3 shall be at the cost and expense of Site Owner.

Prior to the construction of new structures located off-site on the Affected Area of the Unither property to the south of the Area 2 ditch, SVI mitigation will be installed as an element of the building foundation without first conducting an investigation, and an appropriate SVI evaluation will be completed to confirm the system is operating effectively, in accordance with NYSDOH guidance. The incremental cost and expense of installing, testing, monitoring, operating and maintaining a SSDS in such new building shall be at the cost and expense of Site Owner.

4.5 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.

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. If future site development or future development on the Affected Area of the Unither property results in the installation of a mechanical system such as a vapor intrusion mitigation system, or a vapor intrusion mitigation system is installed in Unither 3 because of changes observed in the long-term groundwater monitoring, the SMP would be amended to include operation and maintenance procedures for any such system.

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.

This section provides a summary of vulnerability assessments that will be conducted for the Site during periodic assessments, and briefly summarizes the vulnerability of the Site and/or engineering controls to severe storms/weather events and associated flooding.

- Flood Plain: Per the FEMA flood maps, the Site is not located in a floodplain and is in an area prone to minimal flooding.
- Site Drainage and Storm Water Management: low lying catch basins on-site can flood if the outlets located in the storm water ditch become clogged with materials.
- Erosion: The potential for erosion is minimal.
- High Winds; The Site is currently vacant. No structures exist on-site that would potentially be effected by high winds.
- Electricity: The Site is currently vacant and no electric service connections.
- Spill/Contaminant Release: The Site is currently vacant. No structures exist on-site that would potentially contribute to a spill/contaminant release.

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. Green remediation evaluations will not be completed for the Site during Site management because no technology was implemented as part of the remedy nor will be implemented as part of Site management.

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.

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] and summarized in the Periodic Review Report.

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 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 A -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, and possibly 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 in accordance with the requirements found at this link: <http://www.dec.ny.gov/chemical/62440.html>. The EQuIS™ data deliverable will be submitted to the NYSDEC within 90 days of receiving the data from the laboratory.
- 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;
 - A groundwater elevation contour map created for each groundwater sampling event, including on-site and off-Site wells that are part of the Long-Term Groundwater Monitoring network detailed in Table V.
 - 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.

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;*
- *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, _____, of _____, am certifying as

Owner's/Remedial Party's Designated Site Representative. I have been authorized and designated by all Site owners/remedial parties to sign this certification for the Site."

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 NYSDEC for approval. A general outline for the RSO report is provided in Appendix K. 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. A final engineering report and update to the SMP may also be required.

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.

REFERENCES

6NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

NYSDEC DER-10 – “Technical Guidance for Site Investigation and Remediation”.

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

Remedial Investigation Work Plan (and Community Participation Plan) - Brownfield Cleanup Program, Site# C828148, Former AB Dick Facility, 811 Jefferson Road, Town of Henrietta, Monroe County, New York, Stantec Consulting Services, Inc., March 2008.

Revised Remedial Investigation Report - Former AB Dick Facility, 811 Jefferson Road, Town of Henrietta, Monroe County, New York, Stantec Consulting Services, Inc., October 2010.

Supplemental Investigation Report - Former AB Dick Facility, 811 Jefferson Road, Town of Henrietta, Monroe County, New York, Stantec Consulting Services, Inc., October 2010.

Pre-Design Assessment Report - Former AB Dick Facility, 811 Jefferson Road, Town of Henrietta, Monroe County, New York, Haley & Aldrich of New York. October 2011.

Revised Alternatives Analysis Report – Former AB Dick Facility, 811 Jefferson Road, Town of Henrietta, Monroe County, New York, Haley & Aldrich of New York, 30 August 2013.

Interim Remedial Measure Completion Report, Haley & Aldrich of New York, 30 August 2013.

Decision Document – Former A B Dick Facility Brownfield Cleanup Program, Rochester, Monroe County, Site no. C828148, NYSDEC, October 2016.

Remedial Action Work Plan - Former AB Dick Facility, 811 Jefferson Road, Town of Henrietta, Monroe County, New York, Haley & Aldrich of New York. January 2017.

TABLES

TABLE II
GROUNDWATER ELEVATION DATA
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

Well ID		27-Sep-17		16-Aug-17		5-Jul-17		14-Jun-17		17-Mar-17		20-Oct-16	
		Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-1I-R*	555.28	1.56	553.72	2.87	552.41	2.51	552.77	2.26	553.02	1.21	-	-	-
MW-1D-R*	554.86	-	-	-	-	-	-	34.08	520.78	-	-	-	-
MW-2	554.60	-	-	-	-	-	-	-	-	2.11	552.49	-	-
MW-2R*	554.80	2.83	551.97	1.75	553.05	0.88	553.92	1.68	553.12	-	-	-	-
MW-3I	553.65	-	-	-	-	-	-	1.80	551.85	-	-	-	-
MW-4I	553.26	-	-	-	-	-	-	2.95	550.31	-	-	-	-
MW-5D-R*	553.60	33.46	520.14	32.55	521.05	31.93	521.67	32.45	521.15	32.51	521.09	-	-
MW-6I	554.79	-	-	-	-	-	-	2.88	551.91	-	-	-	-
MW-8	555.12	-	-	-	-	-	-	-	-	3.17	551.95	-	-
MW-8R*	555.28	2.41	552.87	1.29	553.99	0.42	554.86	1.33	553.95	-	-		
MW-22	555.12	-	-	-	-	-	-	-	-	1.75	553.37	3.09	552.03
MW-22R*	554.82	2.81	552.01	2.81	552.01	1.46	553.36	2.80	552.02	-	-	-	-
MW-25	553.76	-	-	-	-	-	-	2.15	551.61	-	-	-	-
MW-27	554.75	-	-	-	-	-	-	-	-	0.80	553.95	1.70	553.05
MW-27R*	554.82	3.03	551.79	1.88	552.94	1.71	553.11	1.88	552.94	-	-		
MW-28	554.02	-	-	-	-	-	-	1.95	552.07	-	-	-	-
MW-33	552.82	-	-	-	-	-	-	1.72	551.10	-	-	-	-
MW-35	554.74	-	-	-	-	-	-	1.62	553.12	-	-	-	-
MW-38	553.51	-	-	-	-	-	-	NA	-	3.98	549.53	4.80	548.71
MW-54	545.02	0.55	544.47	0.10	544.92	0.30	544.72	0.19	544.83	0.00	545.02	1.13	543.89
MW-55	544.03	2.31	541.72	1.00	543.03	0.63	543.4	1.95	542.08	0.60	543.43	-	-
MW-57	552.53	-	-	-	-	-	-	4.95	547.58	-	-	-	-
MW-58	543.74	-	-	0.60	543.14	0.10	543.64	0.77	542.97	1.44	542.3	-	-
MW-62	553.89	-	-	-	-	-	-	5.80	548.09	4.10	549.79	4.82	549.07
MW-63	552.91	5.93	546.98	-	-	-	-	4.45	548.46	4.10	548.81	5.06	547.85
MW-64	554.84	-	-	-	-	-	-	5.69	549.15	-	-	-	-
MW-68	552.43	-	-	-	-	-	-	2.32	550.11	-	-	-	-
MW-69	551.66	4.07	547.59	3.10	548.56	2.14	549.52	2.19	549.47	0.85	550.81	-	-
MW-70	548.99	4.00	544.99	3.10	545.89	2.92	546.07	3.11	545.88	2.08	546.91	-	-
MW-74	550.55	2.55	548	1.86	548.69	0.99	549.56	4.45	546.1	0.85	549.7	-	-
MW-76*	548.73	10.96	537.77	8.09	540.64	7.75	540.98	5.61	543.12	5.13	543.6	-	-
MW-77*	543.87	2.02	541.85	2.03	541.84	1.24	542.63	1.03	542.84	2.19	541.68	-	-
MW-78*	543.86	1.18	542.68	0.48	543.38	0.55	543.31	0.60	543.26	4.11	539.75	-	-
UCB-MW-03	548.83	3.28	545.55	2.92	545.91	2.92	545.91	3.30	545.53	2.26	546.57	-	-

Notes and Abbreviations:

- Elevation readings collected from top of inner casing
- * Monitoring wells surveyed by Hoffman Land Surveying & Geomatics of Ontario, NY

- December 2005 to May 2010 readings collected by Stantec Consulting, Inc.

- October 2016 to March 2017 readings collected by Haley & Aldrich of New York

- All groundwater elevation readings in feet above mean sea level
- All Depth to Water readings in feet below ground surface
- "-" reading not collected

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GROUNDWATER ELEVATION DATA
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

Well ID		10-May-10		4-May-09		20-Apr-09		25-Mar-09		24-Feb-09		14-Nov-08	
		Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-1I-R*	555.28	-	-	-	-	-	-	-	-	-	-	-	-
MW-1D-R*	554.86	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	554.60	1.43	553.17	2.11	552.49	-	-	-	-	-	-	2.94	551.66
MW-2R*	554.80	-	-	-	-	-	-	-	-	-	-	-	-
MW-3I	553.65	-	-	3.11	550.54	-	-	-	-	-	-	3.42	550.23
MW-4I	553.26	-	-	3.39	549.87	-	-	-	-	-	-	3.58	549.68
MW-5D-R*	553.60	-	-	-	-	-	-	-	-	-	-	-	-
MW-6I	554.79	-	-	4.34	550.45	-	-	-	-	-	-	5.76	549.03
MW-8	555.12	3.16	551.96	3.31	551.81	-	-	-	-	-	-	3.28	551.84
MW-8R*	555.28	-	-	-	-	-	-	-	-	-	-	-	-
MW-22	555.12	2.06	553.06	2.96	552.16	-	-	-	-	-	-	3.81	551.31
MW-22R*	554.82	-	-	-	-	-	-	-	-	-	-	-	-
MW-25	553.76	2.60	551.16	2.43	551.33	-	-	-	-	-	-	2.94	550.82
MW-27	554.75	1.89	552.86	2.60	552.15	-	-	-	-	-	-	3.29	551.46
MW-27R*	554.82	-	-	-	-	-	-	-	-	-	-	-	-
MW-28	554.02	2.76	551.26	2.64	551.38					-	-	3.12	550.90
MW-33	552.82	2.45	550.37	2.19	550.63	-	-	-	-	-	-	2.77	550.05
MW-35	554.74	2.04	552.70	2.39	552.35	-	-	-	-	-	-	2.75	551.99
MW-38	553.51	4.36	549.15	4.46	549.05	4.46	549.05	4.45	549.06	-	-	4.82	548.69
MW-54	545.02	0.44	544.58	0.46	544.56	-	-	0.28	544.74	-	-	0.54	544.48
MW-55	544.03	1.53	542.50	1.51	542.52	-	-	1.17	542.86	-	-	1.72	542.31
MW-57	552.53	4.90	547.63	4.75	547.78	4.34	548.19	3.54	548.99	-	-	5.6	546.93
MW-58	543.74	0.66	543.08	0.8	543.11	-	-	-	-	-	-	0.57	543.17
MW-62	553.89	4.45	549.44	4.58	549.31	4.53	549.36	4.52	549.36	-	-	4.87	549.02
MW-63	552.91	5.06	547.85	5.11	547.8	-	-	4.89	548.02	-	-	5.38	547.53
MW-64	554.84	6.31	548.53	6.46	548.38	6.44	548.40	6.50	548.34	8.37	546.47	-	-
MW-68	552.43	2.81	549.62	2.40	550.03	-	-	-	-	3.59	548.84	-	-
MW-69	551.66	2.30	549.36	2.26	549.4	2.61	549.05	-	-	-	-	-	-
MW-70	548.99	1.41	547.58	1.88	547.11	3.33	545.66	-	-	-	-	-	-
MW-74	550.55	2.13	548.42	-	-	-	-	-	-	-	-	-	-
MW-76*	548.73	-	-	-	-	-	-	-	-	-	-	-	-
MW-77*	543.87	-	-	-	-	-	-	-	-	-	-	-	-
MW-78*	543.86	-	-	-	-	-	-	-	-	-	-	-	-
UCB-MW-03	548.83			3.31	545.52	-	-	-	-	-	-	-	-

Notes and Abbreviations:

- Elevation readings collected from top of inner casing
- * Monitoring wells surveyed by Hoffman Land Surveying & Geomatics of Ontario, NY
- December 2005 to May 2010 readings collected by Stantec Consulting, Inc.
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- All groundwater elevation readings in feet above mean sea level
- All Depth to Water readings in feet below ground surface
- "-" reading not collected

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GROUNDWATER ELEVATION DATA
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

Well ID		18-Aug-08		30-Jun-08		7-Dec-05	
		Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation	Depth to Water	Groundwater Elevation
MW-1I-R*	555.28	-	-	-	-	-	-
MW-1D-R*	554.86	-	-	-	-	-	-
MW-2	554.60	2.29	552.31	2.18	552.42	3.50	551.10
MW-2R*	554.80	-	-	-	-	-	-
MW-3I	553.65	3.09	547.45	3.12	550.53	-	-
MW-4I	553.26	3.67	549.59	3.67	549.59	-	-
MW-5D-R*	553.60	-	-	-	-	-	-
MW-6I	554.79	-	-	-	-	-	-
MW-8	555.12	3.04	552.08	2.8	552.32	4.68	550.44
MW-8R*	555.28	-	-	-	-	-	-
MW-22	555.12	3.33	551.79	3.02	552.1	4.38	550.74
MW-22R*	554.82	-	-	-	-	-	-
MW-25	553.76	2.63	551.13	2.51	551.25	2.84	550.92
MW-27	554.75	2.71	552.04	2.46	552.29	3.96	550.79
MW-27R*	554.82	-	-	-	-	-	-
MW-28	554.02	2.79	551.23	2.63	551.39	3.1	550.92
MW-33	552.82	2.3	550.52	2.47	550.35	-	-
MW-35	554.74	2.41	552.33	2.03	552.71	-	-
MW-38	553.51	5.26	548.25	-	-	-	-
MW-54	545.02	0.76	544.26	-	-	-	-
MW-55	544.03	1.73	542.3	-	-	-	-
MW-57	552.53	5.57	546.96	-	-	-	-
MW-58	543.74	0.7	543.04	-	-	-	-
MW-62	553.89	-	-	-	-	-	-
MW-63	552.91	-	-	-	-	-	-
MW-64	554.84	-	-	-	-	-	-
MW-68	552.43	-	-	-	-	-	-
MW-69	551.66	-	-	-	-	-	-
MW-70	548.99	-	-	-	-	-	-
MW-74	550.55	-	-	-	-	-	-
MW-76*	548.73	-	-	-	-	-	-
MW-77*	543.87	-	-	-	-	-	-
MW-78*	543.86	-	-	-	-	-	-
UCB-MW-03	548.83	-	-	-	-	-	-

Notes and Abbreviations:

- Elevation readings collected from top of inner casing
- * Monitoring wells surveyed by Hoffman Land Surveying & Geomatics of Ontario, NY
- December 2005 to May 2010 readings collected by Stantec Consulting, Inc.
- October 2016 to March 2017 readings collected by Haley & Aldrich of New York
- All groundwater elevation readings in feet above mean sea level
- All Depth to Water readings in feet below ground surface
- "-" reading not collected

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1712616-01	L1712616-07	L1712616-02	L1712616-03	L1712616-04	L1712616-05	L1712616-06	L1712801-01
		Sample ID	4125-042017-0900	4125-042017-1250	4125-042017-0915	4125-042017-1000	4125-042017-1025	4125-042017-1055	4125-042017-1220	4347-042117-0845
		Area	Area 1A Sidewall - South	Area 1A Sidewall - South						Stormwater Pipe Removal -
		Location	East	East	Area 1A Bottom - South	Area 1A Sidewall - North	Area 1A Bottom - North	Area 1A Sidewall - South	Area 1A Sidewall - West	Sidewall East
		Sample Depth (ft.)	5.0-6.0	5.0-6.0	9.0-10.0	5.0-6.0	7.0-8.0	7.0-8.0	7.0-8.0	1.0-1.5
		Sample Date	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	4/21/2017
		Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal
Inorganic Compounds (mg/kg)										
Aluminum			-	-	-	-	-	-	-	5,800 J-
Antimony			-	-	-	-	-	-	-	ND (0.34)
Arsenic	16		-	-	-	-	-	-	-	3.2
Barium	400		-	-	-	-	-	-	-	42
Beryllium	590		-	-	-	-	-	-	-	ND (0.03)
Cadmium	9.3		-	-	-	-	-	-	-	0.17 J
Calcium			-	-	-	-	-	-	-	36,000
Chromium			-	-	-	-	-	-	-	8
Cobalt			-	-	-	-	-	-	-	3.4
Copper	270		-	-	-	-	-	-	-	10
Iron			-	-	-	-	-	-	-	10,000
Lead	1000		-	-	-	-	-	-	-	8.2
Magnesium			-	-	-	-	-	-	-	12,000
Manganese	10000		-	-	-	-	-	-	-	220
Mercury	2.8		-	-	-	-	-	-	-	ND (0.02)
Nickel	310		-	-	-	-	-	-	-	8.0
Potassium			-	-	-	-	-	-	-	530
Selenium	1500		-	-	-	-	-	-	-	ND (0.23)
Silver	1500		-	-	-	-	-	-	-	ND (0.25)
Sodium			-	-	-	-	-	-	-	85 J
Thallium			-	-	-	-	-	-	-	ND (0.28)
Vanadium			-	-	-	-	-	-	-	12
Zinc	10000		-	-	-	-	-	-	-	43
PCBs (ug/kg)										
Aroclor-1016 (PCB-1016)			-	-	-	-	-	-	-	ND (2.92)
Aroclor-1221 (PCB-1221)			-	-	-	-	-	-	-	ND (3.41)
Aroclor-1232 (PCB-1232)			-	-	-	-	-	-	-	ND (4.33)
Aroclor-1242 (PCB-1242)			-	-	-	-	-	-	-	ND (4.52)
Aroclor-1248 (PCB-1248)			-	-	-	-	-	-	-	ND (3.12)
Aroclor-1254 (PCB-1254)			-	-	-	-	-	-	-	ND (3.04)
Aroclor-1260 (PCB-1260)			-	-	-	-	-	-	-	ND (2.82)
Aroclor-1262 (PCB-1262)			-	-	-	-	-	-	-	ND (1.83)
Aroclor-1268 (PCB-1268)			-	-	-	-	-	-	-	ND (5.36)
Polychlorinated biphenyls (PCBs)	1000		-	-	-	-	-	-	-	ND (1.83)
Semi-Volatile Organic Compounds (ug/kg)										
1,2,4,5-Tetrachlorobenzene			-	-	-	-	-	-	-	ND (20)
2,2'-oxybis(1-Chloropropane)			-	-	-	-	-	-	-	ND (32)
2,3,4,6-Tetrachlorophenol			-	-	-	-	-	-	-	ND (38)
2,4,5-Trichlorophenol			-	-	-	-	-	-	-	ND (36)
2,4,6-Trichlorophenol			-	-	-	-	-	-	-	ND (35)
2,4-Dichlorophenol			-	-	-	-	-	-	-	ND (30)
2,4-Dimethylphenol			-	-	-	-	-	-	-	ND (62)
2,4-Dinitrophenol			-	-	-	-	-	-	-	ND (87)
2,4-Dinitrotoluene			-	-	-	-	-	-	-	ND (37)
2,6-Dinitrotoluene			-	-	-	-	-	-	-	ND (32)
2-Chloronaphthalene			-	-	-	-	-	-	-	ND (18)
2-Chlorophenol			-	-	-	-	-	-	-	ND (22)
2-Methylnaphthalene			-	-	-	-	-	-	-	ND (22)
2-Methylphenol (o-Cresol)	500000		-	-	-	-	-	-	-	ND (29)
2-Nitroaniline			-	-	-	-	-	-	-	ND (36)
2-Nitrophenol			-	-	-	-	-	-	-	ND (70)
3,3'-Dichlorobenzidine			-	-	-	-	-	-	-	ND (50) J

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1712616-01 4125-042017-0900 Area 1A Sidewall - South	L1712616-07 4125-042017-1250 Area 1A Sidewall - South	L1712616-02 4125-042017-0915 Area 1A Bottom - South	L1712616-03 4125-042017-1000 Area 1A Sidewall - North	L1712616-04 4125-042017-1025 Area 1A Bottom - North	L1712616-05 4125-042017-1055 Area 1A Sidewall - South	L1712616-06 4125-042017-1220 Area 1A Sidewall - West	L1712801-01 4347-042117-0845 Stormwater Pipe Removal - Sidewall East
		Location	East	East	Area 1A Bottom - South	Area 1A Sidewall - North	Area 1A Bottom - North	Area 1A Sidewall - South	Area 1A Sidewall - West	Sidewall East
		Sample Depth (ft.)	5.0-6.0	5.0-6.0	9.0-10.0	5.0-6.0	7.0-8.0	7.0-8.0	7.0-8.0	1.0-1.5
		Sample Date	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	4/21/2017
		Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal
3-Methylphenol	500000		-	-	-	-	-	-	-	ND (29)
3-Nitroaniline			-	-	-	-	-	-	-	ND (35)
4,6-Dinitro-2-methylphenol			-	-	-	-	-	-	-	ND (90)
4-Bromophenyl phenyl ether			-	-	-	-	-	-	-	ND (28)
4-Chloro-3-methylphenol			-	-	-	-	-	-	-	ND (28)
4-Chloroaniline			-	-	-	-	-	-	-	ND (34)
4-Chlorophenyl phenyl ether			-	-	-	-	-	-	-	ND (20)
4-Nitroaniline			-	-	-	-	-	-	-	ND (77)
4-Nitrophenol			-	-	-	-	-	-	-	ND (76)
Acenaphthene	500000		-	-	-	-	-	-	-	ND (19)
Acenaphthylene	500000		-	-	-	-	-	-	-	ND (29)
Acetophenone			-	-	-	-	-	-	-	ND (23) J
Anthracene	500000		-	-	-	-	-	-	-	ND (36)
Atrazine			-	-	-	-	-	-	-	ND (65)
Benzaldehyde			-	-	-	-	-	-	-	ND (50)
Benzo(a)anthracene	5600		-	-	-	-	-	-	-	ND (21)
Benzo(a)pyrene	1000		-	-	-	-	-	-	-	ND (46)
Benzo(b)fluoranthene	5600		-	-	-	-	-	-	-	ND (31)
Benzo(g,h,i)perylene	500000		-	-	-	-	-	-	-	ND (22)
Benzo(k)fluoranthene	56000		-	-	-	-	-	-	-	ND (30)
Biphenyl			-	-	-	-	-	-	-	ND (43) J
bis(2-Chloroethoxy)methane			-	-	-	-	-	-	-	ND (19)
bis(2-Chloroethyl)ether			-	-	-	-	-	-	-	ND (25)
bis(2-Ethylhexyl)phthalate			-	-	-	-	-	-	-	ND (65)
Butyl benzylphthalate			-	-	-	-	-	-	-	ND (47)
Caprolactam			-	-	-	-	-	-	-	ND (57)
Carbazole			-	-	-	-	-	-	-	ND (18) J
Chrysene	56000		-	-	-	-	-	-	-	ND (19)
Dibenz(a,h)anthracene	560		-	-	-	-	-	-	-	ND (22)
Dibenzofuran	350000		-	-	-	-	-	-	-	ND (18)
Diethyl phthalate			-	-	-	-	-	-	-	ND (17)
Dimethyl phthalate			-	-	-	-	-	-	-	ND (39)
Di-n-butylphthalate			-	-	-	-	-	-	-	ND (35)
Di-n-octyl phthalate			-	-	-	-	-	-	-	ND (64)
Fluoranthene	500000		-	-	-	-	-	-	-	ND (21)
Fluorene	500000		-	-	-	-	-	-	-	ND (18)
Hexachlorobenzene	6000		-	-	-	-	-	-	-	ND (21)
Hexachlorobutadiene			-	-	-	-	-	-	-	ND (27)
Hexachlorocyclopentadiene			-	-	-	-	-	-	-	ND (170)
Hexachloroethane			-	-	-	-	-	-	-	ND (30)
Indeno(1,2,3-cd)pyrene	5600		-	-	-	-	-	-	-	ND (26)
Isophorone			-	-	-	-	-	-	-	ND (24)
Naphthalene	500000		-	-	-	-	-	-	-	ND (23)
Nitrobenzene	69000		-	-	-	-	-	-	-	ND (28)
N-Nitrosodi-n-propylamine			-	-	-	-	-	-	-	ND (29)
N-Nitrosodiphenylamine			-	-	-	-	-	-	-	ND (21)
Pentachlorophenol	6700		-	-	-	-	-	-	-	ND (41)
Phenanthrene	500000		-	-	-	-	-	-	-	ND (23)
Phenol	500000		-	-	-	-	-	-	-	ND (28)
Pyrene	500000		-	-	-	-	-	-	-	ND (18)
Volatile Organic Compounds (ug/kg)										
1,1,1-Trichloroethane	500000		-	-	-	-	-	-	-	ND (0.22)
1,1,2,2-Tetrachloroethane			-	-	-	-	-	-	-	ND (0.19)
1,1,2-Trichloroethane			-	-	-	-	-	-	-	ND (0.20)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID	L1712616-01	L1712616-07	L1712616-02	L1712616-03	L1712616-04	L1712616-05	L1712616-06	L1712801-01
		Sample ID	4125-042017-0900	4125-042017-1250	4125-042017-0915	4125-042017-1000	4125-042017-1025	4125-042017-1055	4125-042017-1220	4347-042117-0845
		Location	Area 1A Sidewall - South	Area 1A Sidewall - South	Area 1A Bottom - South	Area 1A Sidewall - North	Area 1A Bottom - North	Area 1A Sidewall - South	Area 1A Sidewall - West	Stormwater Pipe Removal -
		Sample Depth (ft.)	East	East	9.0-10.0	5.0-6.0	7.0-8.0	7.0-8.0	7.0-8.0	Sidewall East
		Sample Date	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	4/21/2017
		Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal
1,1-Dichloroethane	240000		-	-	-	-	-	-	-	ND (0.17)
1,1-Dichloroethene	500000		ND (18)	ND (0.16) J	ND (11)	ND (0.28) J	ND (12)	ND (14)	ND (13)	ND (0.24)
1,2,3-Trichlorobenzene			-	-	-	-	-	-	-	ND (0.16)
1,2,4-Trichlorobenzene			-	-	-	-	-	-	-	ND (0.14)
1,2,4-Trimethylbenzene	190000		-	-	-	-	-	-	-	ND (0.12)
1,2-Dibromo-3-chloropropane (DBCP)			-	-	-	-	-	-	-	ND (0.25)
1,2-Dibromoethane (Ethylene Dibromide)			-	-	-	-	-	-	-	ND (0.13)
1,2-Dichlorobenzene	500000		-	-	-	-	-	-	-	ND (0.12)
1,2-Dichloroethane	30000		-	-	-	-	-	-	-	ND (0.16)
1,2-Dichloroethene (total)			-	-	-	-	-	-	-	-
1,2-Dichloropropane			-	-	-	-	-	-	-	ND (0.15)
1,3,5-Trimethylbenzene	190000		-	-	-	-	-	-	-	ND (0.10)
1,3-Dichlorobenzene	280000		-	-	-	-	-	-	-	ND (0.14)
1,4-Dichlorobenzene	130000		-	-	-	-	-	-	-	ND (0.12)
1,4-Dioxane	130000		-	-	-	-	-	-	-	ND (9.2)
2-Butanone (Methyl Ethyl Ketone)	500000		-	-	-	-	-	-	-	ND (0.44)
2-Hexanone			-	-	-	-	-	-	-	ND (0.43)
2-Phenylbutane (sec-Butylbenzene)	500000		-	-	-	-	-	-	-	ND (0.14)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)			-	-	-	-	-	-	-	ND (0.16)
Acetone	500000		-	-	-	-	-	-	-	1.5 J
Benzene	44000		-	-	-	-	-	-	-	ND (0.12)
Bromodichloromethane			-	-	-	-	-	-	-	ND (0.20)
Bromoform			-	-	-	-	-	-	-	ND (0.15)
Bromomethane (Methyl Bromide)			-	-	-	-	-	-	-	ND (0.22)
Carbon disulfide			-	-	-	-	-	-	-	ND (0.70) J
Carbon tetrachloride	22000		-	-	-	-	-	-	-	ND (0.22)
Chlorobenzene	500000		-	-	-	-	-	-	-	ND (0.22)
Chlorobromomethane			-	-	-	-	-	-	-	ND (0.23)
Chloroethane			-	-	-	-	-	-	-	ND (0.20)
Chloroform (Trichloromethane)	350000		-	-	-	-	-	-	-	ND (0.24)
Chloromethane (Methyl Chloride)			-	-	-	-	-	-	-	ND (0.28)
cis-1,2-Dichloroethene	500000		ND (16)	ND (0.15) R	29	0.43 J+	ND (11)	ND (13)	22 J	ND (0.22)
cis-1,3-Dichloropropene			-	-	-	-	-	-	-	ND (0.15)
Cyclohexane			-	-	-	-	-	-	-	ND (0.28)
Cymene (p-Isopropyltoluene)			-	-	-	-	-	-	-	ND (0.13)
Dibromochloromethane			-	-	-	-	-	-	-	ND (0.11)
Dichlorodifluoromethane (CFC-12)			-	-	-	-	-	-	-	ND (0.32)
Ethylbenzene	390000		-	-	-	-	-	-	-	ND (0.11)
Isopropylbenzene (Cumene)			-	-	-	-	-	-	-	ND (0.12)
m,p-Xylenes			-	-	-	-	-	-	-	ND (0.22)
Methyl acetate			-	-	-	-	-	-	-	ND (0.30)
Methyl cyclohexane			-	-	-	-	-	-	-	ND (0.15)
Methyl Tert Butyl Ether	500000		-	-	-	-	-	-	-	ND (0.10)
Methylene chloride	500000		-	-	-	-	-	-	-	ND (1.0)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1712616-01 4125-042017-0900 Area 1A Sidewall - South	L1712616-07 4125-042017-1250 Area 1A Sidewall - South	L1712616-02 4125-042017-0915 Area 1A Bottom - South	L1712616-03 4125-042017-1000 Area 1A Sidewall - North	L1712616-04 4125-042017-1025 Area 1A Bottom - North	L1712616-05 4125-042017-1055 Area 1A Sidewall - South	L1712616-06 4125-042017-1220 Area 1A Sidewall - West	L1712801-01 4347-042117-0845 Stormwater Pipe Removal - Sidewall East
		Location	East	East						
		Sample Depth (ft.)	5.0-6.0	5.0-6.0	9.0-10.0	5.0-6.0	7.0-8.0	7.0-8.0	7.0-8.0	1.0-1.5
		Sample Date	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	04/20/2017	4/21/2017
		Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal
Naphthalene	500000		-	-	-	-	-	-	-	ND (0.09)
n-Butylbenzene	500000		-	-	-	-	-	-	-	ND (0.15)
n-Propylbenzene	500000		-	-	-	-	-	-	-	ND (0.14)
o-Xylene			-	-	-	-	-	-	-	ND (0.22)
Styrene			-	-	-	-	-	-	-	ND (0.26)
Tetrachloroethene	150000		ND (14)	ND (0.13)	ND (8.7)	ND (0.22)	21 J	ND (11)	ND (10)	ND (0.19)
Toluene	500000		-	-	-	-	-	-	-	ND (0.12)
trans-1,2-Dichloroethene	500000		-	-	-	-	-	-	-	ND (0.15)
trans-1,3-Dichloropropene			-	-	-	-	-	-	-	ND (0.13)
Trichloroethene	200000		ND (14)	ND (0.13) R	ND (8.7)	ND (0.22) R	3000	ND (11)	ND (10)	ND (0.19)
Trichlorofluoromethane (CFC-11)			-	-	-	-	-	-	-	ND (0.27)
Trifluorotrichloroethane (Freon 113)			-	-	-	-	-	-	-	ND (0.33)
Vinyl chloride	13000		ND (15)	ND (0.14)	ND (9.1)	3.7	ND (10) J	ND (12)	ND (11)	ND (0.20)
Xylene (total)	500000		-	-	-	-	-	-	-	ND (0.22)

Notes and Abbreviations:

1. Results were compared to the Restricted Use Soil Cleanup Objective (SCO)
for Commercial (NYSDEC, Table 375-6.8(b), December 2006).

2. Results in dark gray shading exceed applicable criteria.

3. ND (#): Result is not detected above the indicated reporting limit.

J: Estimated result

J+: Estimated result, biased high

R: Rejected

4. Results in **bold** are detected.

* - Bottom confirmation samples were collected before excavation activities using a
geoprobe.

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID	L1712801-02	L1712801-03	L1717921-11	L1717921-14	L1718140-06	L1718729-01	L1717921-10	L1717921-12
		Sample ID	4347-042117-0850	4347-042117-0903	4542-170531-1515	4542-170531-1550	4542-170601-1245	4542-170606-0930	4542-170531-1450	4542-170531-1525
		Location	Stormwater Pipe Removal - Sidewall West	Stormwater Pipe Removal - Bottom	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A South Sidewall	Area 2A South Sidewall
		Sample Depth (ft.)	1.0-1.5	4.5-5.0	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5
		Sample Date	4/21/2017	4/21/2017	05/31/2017	05/31/2017	06/01/2017	06/06/2017	05/31/2017	05/31/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Inorganic Compounds (mg/kg)										
Aluminum			4,500 J-	3,500 J-	3,720 J	4,050 J	5,080	3,400	6,000 J	4,470 J
Antimony			ND (0.34)	ND (0.34)	ND (0.340)	ND (0.337)	ND (0.337)	ND (0.324)	ND (0.367)	ND (0.324)
Arsenic	16		3.0	2.6	2.31	3.03	3.6	2.31	3.65	2.48
Barium	400		35	26	32.8	33.4	41.5	27.7	55.6	38.7
Beryllium	590		ND (0.03)	ND (0.03)	0.063 J	ND (0.029)	0.222 J	0.077	0.145 J	0.094 J
Cadmium	9.3		0.22 J	0.19 J	ND (0.088)	0.239 J	0.284 J	0.128	ND (0.095)	ND (0.084)
Calcium			45,000	37,000	48,100 J	40,200 J	54,500	37,500	55,300 J	48,600 J
Chromium			6.4	17	7.2	7.27	7.6	5.41	9.64	7.6
Cobalt			3.7	3.1	2.97	3.28	5.07	2.86	4.27	3.42
Copper	270		10	8.6	10.6	9.8	11.8	8.85	12.3	11.6
Iron			9,600	8,200	9,070 J	9,740 J	11,300	8,100	12,800 J	10,300 J
Lead	1000		6.7	6.3	5.7	5.72	6.3	4.9	28.7	6.39
Magnesium			12,000	12,000	14,400 J	11,000 J	14,600	12,900	14,800 J	16,600 J
Manganese	10000		250	220	243 J	319 J	376	247	298 J	266 J
Mercury	2.8		ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Nickel	310		7.5	6.2	6.49	7.32	9.94	6.28	9.87	7.84
Potassium			460	480	456	468	519	488	728	532
Selenium	1500		ND (0.23)	ND (0.23)	ND (0.231)	ND (0.229)	0.683 J	0.272	ND (0.249)	ND (0.220)
Silver	1500		ND (0.26)	ND (0.25)	ND (0.253)	ND (0.251)	ND (0.251)	ND (0.241)	ND (0.273)	ND (0.241)
Sodium			87 J	120 J	ND (2.82)	ND (2.79)	107 J	96.4	294	ND (2.68)
Thallium			ND (0.28)	ND (0.28)	ND (0.282) J	ND (0.279) J	ND (0.280)	ND (0.268)	ND (0.304) J	ND (0.268) J
Vanadium			12	10	10.5	11.2	12.9	9.18	15.2	11.7
Zinc	10000		45	34	37.5	33.8	45.1	93.4	41	46.8
PCBs (ug/kg)										
Aroclor-1016 (PCB-1016)			ND (2.99)	ND (2.96)	ND (2.90) J	ND (2.85)	ND (2.90)	ND (2.90)	ND (3.11) J	ND (2.91) J
Aroclor-1221 (PCB-1221)			ND (3.49)	ND (3.46)	ND (3.39)	ND (3.32)	ND (3.38)	ND (3.39)	ND (3.63)	ND (3.40)
Aroclor-1232 (PCB-1232)			ND (4.44)	ND (4.39)	ND (4.31)	ND (4.22)	ND (4.30)	ND (4.30)	ND (4.61)	ND (4.32)
Aroclor-1242 (PCB-1242)			ND (4.64)	ND (4.59)	ND (4.50)	ND (4.41)	ND (4.49)	ND (4.50)	ND (4.82)	ND (4.51)
Aroclor-1248 (PCB-1248)			ND (3.20)	ND (3.16)	ND (3.10)	ND (3.04)	ND (3.09)	ND (3.10)	ND (3.32)	ND (3.11)
Aroclor-1254 (PCB-1254)			ND (3.12)	40.5	ND (3.02)	4.88 J	4.21 J	120 J	4.84 J	3.69 J
Aroclor-1260 (PCB-1260)			ND (2.89)	15.5 J	ND (2.80)	ND (2.75)	ND (2.79)	25.2	ND (3.00)	ND (2.81)
Aroclor-1262 (PCB-1262)			ND (1.88)	ND (1.86)	ND (1.82)	ND (1.79)	ND (1.82)	ND (1.82)	ND (1.95)	ND (1.83)
Aroclor-1268 (PCB-1268)			ND (5.50)	ND (5.43)	ND (5.33)	ND (5.22)	ND (5.32)	ND (5.32)	ND (5.71)	ND (5.34)
Polychlorinated biphenyls (PCBs)	1000		ND (1.88)	56.0 J	ND (1.82)	4.88 J	4.21 J	145	4.84 J	3.69 J
Semi-Volatile Organic Compounds (ug/kg)										
1,2,4,5-Tetrachlorobenzene			ND (20)	ND (20)	ND (20)	ND (19)	ND (20)	ND (19)	ND (21)	ND (19)
2,2'-oxybis(1-Chloropropane)			ND (32)	ND (32)	ND (33)	ND (31)	ND (32)	ND (32)	ND (34)	ND (32)
2,3,4,6-Tetrachlorophenol			ND (38)	ND (38)	ND (39)	ND (37)	ND (38)	ND (38)	ND (40)	ND (37)
2,4,5-Trichlorophenol			ND (36)	ND (36)	ND (37)	ND (35)	ND (36)	ND (36)	ND (38)	ND (35)
2,4,6-Trichlorophenol			ND (36)	ND (36)	ND (36)	ND (34)	ND (36)	ND (35)	ND (38)	ND (35)
2,4-Dichlorophenol			ND (30)	ND (30)	ND (31)	ND (29)	ND (30)	ND (30)	ND (32)	ND (30)
2,4-Dimethylphenol			ND (62)	ND (62)	ND (63)	ND (60)	ND (62)	ND (62)	ND (66)	ND (61)
2,4-Dinitrophenol			ND (88)	ND (88)	ND (89)	ND (85)	ND (88)	ND (87)	ND (93)	ND (86)
2,4-Dinitrotoluene			ND (38)	ND (38)	ND (38)	ND (36)	ND (38)	ND (37)	ND (40)	ND (37)
2,6-Dinitrotoluene			ND (32)	ND (32)	ND (33)	ND (31)	ND (32)	ND (32)	ND (34)	ND (32)
2-Chloronaphthalene			ND (19)	ND (19)	ND (19)	ND (18)	ND (19)	ND (18)	ND (20)	ND (18)
2-Chlorophenol			ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (24)	ND (22)
2-Methylnaphthalene			ND (23)	ND (23)	ND (23)	ND (22)	ND (23)	ND (22)	ND (24)	ND (22)
2-Methylphenol (o-Cresol)	500000		ND (29)	ND (29)	ND (30)	ND (28)	ND (29)	ND (29)	ND (31)	ND (29)
2-Nitroaniline			ND (36)	ND (36)	ND (37)	ND (35) J	ND (36)	ND (36)	ND (38)	ND (36)
2-Nitrophenol			ND (71)	ND (71)	ND (72)	ND (68) J	ND (71)	ND (70)	ND (75)	ND (69)
3,3'-Dichlorobenzidine			ND (50) J	ND (50) J	ND (51)	ND (48)	ND (50)	ND (50)	ND (53)	ND (49)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID	L1712801-02	L1712801-03	L1717921-11	L1717921-14	L1718140-06	L1718729-01	L1717921-10	L1717921-12
		Sample ID	4347-042117-0850	4347-042117-0903	4542-170531-1515	4542-170531-1550	4542-170601-1245	4542-170606-0930	4542-170531-1450	4542-170531-1525
		Location	Stormwater Pipe Removal - Sidewall West	Stormwater Pipe Removal - Bottom	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A South Sidewall	Area 2A South Sidewall
		Sample Depth (ft.)	1.0-1.5	4.5-5.0	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5
		Sample Date	4/21/2017	4/21/2017	05/31/2017	05/31/2017	06/01/2017	06/06/2017	05/31/2017	05/31/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
3-Methylphenol	500000		ND (30)	ND (30)	ND (30)	ND (28)	ND (29)	ND (29)	ND (31)	ND (29)
3-Nitroaniline			ND (36)	ND (36)	ND (36)	ND (34)	ND (35)	ND (35)	ND (38)	ND (35)
4,6-Dinitro-2-methylphenol			ND (90)	ND (91)	ND (92)	ND (88)	ND (90)	ND (90)	ND (96)	ND (89)
4-Bromophenyl phenyl ether			ND (29)	ND (29)	ND (29)	ND (28)	ND (29)	ND (28)	ND (30)	ND (28)
4-Chloro-3-methylphenol			ND (28)	ND (28)	ND (28)	ND (27)	ND (28)	ND (28)	ND (30)	ND (28)
4-Chloroaniline			ND (34)	ND (34)	ND (35)	ND (33)	ND (34)	ND (34)	ND (36)	ND (34)
4-Chlorophenyl phenyl ether			ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (21)	ND (20)
4-Nitroaniline			ND (78)	ND (78)	ND (79)	ND (76)	ND (78)	ND (77)	ND (82)	ND (76)
4-Nitrophenol			ND (77)	ND (77)	ND (78)	ND (74)	ND (77)	ND (76)	ND (81)	ND (75)
Acenaphthene	500000		ND (20)	ND (20)	ND (20)	ND (19)	ND (19)	ND (19)	ND (21)	ND (19)
Acenaphthylene	500000		ND (29)	ND (29)	ND (30)	ND (28)	ND (29)	ND (29)	ND (31)	ND (28)
Acetophenone			ND (23) J	ND (23) J	ND (24)	ND (22)	ND (23)	ND (23)	ND (25)	ND (23)
Anthracene	500000		ND (37)	ND (37)	ND (37)	ND (36)	ND (37)	ND (36)	ND (39)	ND (36)
Atrazine			ND (66)	ND (66)	ND (67)	ND (64)	ND (66)	ND (65)	ND (70)	ND (65)
Benzaldehyde			ND (51)	ND (51)	ND (52)	ND (49)	ND (51)	ND (50)	ND (54)	ND (50)
Benzo(a)anthracene	5600		ND (21)	ND (21)	ND (22)	45 J	79 J	ND (21)	ND (22)	ND (21)
Benzo(a)pyrene	1000		ND (46)	ND (46)	ND (47)	45 J	68 J	ND (46)	ND (49)	ND (45)
Benzo(b)fluoranthene	5600		ND (32)	ND (32)	ND (32)	56 J	110	ND (31)	ND (34)	ND (31)
Benzo(g,h,i)perylene	500000		ND (22)	ND (22)	ND (22)	ND (21)	49 J	ND (22)	ND (23)	ND (22)
Benzo(k)fluoranthene	56000		ND (30)	ND (30)	ND (30)	ND (29)	40 J	ND (30)	ND (32)	ND (30)
Biphenyl			ND (44) J	ND (44) J	ND (44)	ND (42)	ND (44)	ND (43)	ND (46)	ND (43)
bis(2-Chloroethoxy)methane			ND (19)	ND (19)	ND (19)	ND (18)	ND (19)	ND (19)	ND (20)	ND (18)
bis(2-Chloroethyl)ether			ND (26)	ND (26)	ND (26)	ND (25)	ND (25)	ND (25)	ND (27)	ND (25)
bis(2-Ethylhexyl)phthalate			ND (65)	ND (65)	ND (66)	ND (63)	67 J	ND (64)	ND (69)	ND (64)
Butyl benzylphthalate			ND (47)	ND (48)	ND (48)	ND (46)	ND (47)	ND (47)	ND (50)	ND (46)
Caprolactam			ND (57)	ND (58)	ND (58)	ND (55)	ND (57)	ND (57)	ND (60)	ND (56)
Carbazole			ND (18) J	ND (18) J	ND (18) J	ND (18)	ND (18)	ND (18)	ND (19) J	ND (18) J
Chrysene	56000		ND (20)	ND (20)	ND (20)	46 J	95 J	ND (19)	ND (21)	ND (19)
Dibenz(a,h)anthracene	560		ND (22)	ND (22)	ND (22)	ND (21)	ND (22)	ND (22)	ND (23)	ND (21)
Dibenzofuran	350000		ND (18)	ND (18)	ND (18)	ND (17)	ND (18)	ND (18)	ND (19)	ND (17)
Diethyl phthalate			ND (17)	ND (18)	ND (18)	ND (17)	ND (17)	ND (17)	ND (18)	ND (17)
Dimethyl phthalate			ND (40)	ND (40)	ND (40)	ND (38)	ND (39)	ND (39)	ND (42)	ND (39)
Di-n-butylphthalate			ND (36)	ND (36)	ND (36)	ND (34)	ND (36)	ND (35)	ND (38)	ND (35)
Di-n-octyl phthalate			ND (64)	ND (64)	ND (65)	ND (62)	ND (64)	ND (63)	ND (68)	ND (63)
Fluoranthene	500000		ND (22)	ND (22)	ND (22)	110	210	24	ND (23)	ND (21)
Fluorene	500000		ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (19)	ND (18)
Hexachlorobenzene	6000		ND (21)	ND (21)	ND (21) J	ND (20)	ND (21)	ND (21)	ND (22) J	ND (21) J
Hexachlorobutadiene			ND (28)	ND (28)	ND (28)	ND (27)	ND (27)	ND (27)	ND (29)	ND (27)
Hexachlorocyclopentadiene			ND (170)	ND (170)	ND (170)	ND (160)	ND (170) R	ND (170)	ND (180)	ND (170)
Hexachloroethane			ND (30)	ND (31)	ND (31)	ND (30)	ND (30)	ND (30)	ND (32)	ND (30)
Indeno(1,2,3-cd)pyrene	5600		ND (26)	ND (26)	ND (27)	ND (25)	54 J	ND (26)	ND (28)	ND (26)
Isophorone			ND (24)	ND (24)	ND (25)	ND (24)	ND (24)	ND (24)	ND (26)	ND (24)
Naphthalene	500000		ND (23)	ND (23)	ND (23)	ND (22)	ND (23)	ND (23)	ND (24)	ND (22)
Nitrobenzene	69000		ND (28)	ND (28)	ND (28)	ND (27)	ND (28)	ND (28)	ND (29)	ND (27)
N-Nitrosodi-n-propylamine			ND (29)	ND (29)	ND (30)	ND (28)	ND (29)	ND (29)	ND (31)	ND (28)
N-Nitrosodiphenylamine			ND (21)	ND (22)	ND (22)	ND (21)	ND (21)	ND (21)	ND (23)	ND (21)
Pentachlorophenol	6700		ND (41)	ND (42)	ND (42)	ND (40)	ND (41)	ND (41)	ND (44)	ND (41)
Phenanthrene	500000		ND (23)	ND (23)	ND (23)	66 J	110	ND (23)	ND (24)	ND (22)
Phenol	500000		ND (28)	ND (28)	ND (29)	ND (28)	ND (28)	ND (28)	ND (30)	ND (28)
Pyrene	500000		ND (19)	ND (19)	ND (19)	89 J	170	46	ND (20)	ND (18)
Volatile Organic Compounds (ug/kg)										
1,1,1-Trichloroethane	500000		ND (0.17)	ND (0.16)	ND (0.27)	ND (0.27)	ND (0.29)	ND (0.25)	ND (0.22)	ND (0.26)
1,1,2,2-Tetrachloroethane			ND (0.14)	ND (0.14)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.22)	ND (0.19)	ND (0.22)
1,1,2-Trichloroethane			ND (0.15)	ND (0.14)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.23)	ND (0.20)	ND (0.24)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1712801-02 4347-042117-0850	L1712801-03 4347-042117-0903	L1717921-11 4542-170531-1515	L1717921-14 4542-170531-1550	L1718140-06 4542-170601-1245	L1718729-01 4542-170606-0930	L1717921-10 4542-170531-1450	L1717921-12 4542-170531-1525
		Location	Stormwater Pipe Removal - Sidewall West	Stormwater Pipe Removal - Bottom	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A South Sidewall	Area 2A South Sidewall
		Sample Depth (ft.)	1.0-1.5	4.5-5.0	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5
		Sample Date	4/21/2017	4/21/2017	05/31/2017	05/31/2017	06/01/2017	06/06/2017	05/31/2017	05/31/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
1,1-Dichloroethane	240000		ND (0.13)	ND (0.12)	ND (0.21)	ND (0.20)	ND (0.22)	ND (0.20)	ND (0.17)	ND (0.20)
1,1-Dichloroethene	500000		ND (0.18)	ND (0.17)	ND (0.29)	ND (0.28)	ND (0.31)	ND (0.27)	ND (0.24)	ND (0.28)
1,2,3-Trichlorobenzene			ND (0.12)	ND (0.12)	ND (0.20)	ND (0.19)	ND (0.21)	ND (0.18)	ND (0.16)	ND (0.19)
1,2,4-Trichlorobenzene			ND (0.10)	ND (0.10)	ND (0.17)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.14)	ND (0.16)
1,2,4-Trimethylbenzene	190000		ND (0.09)	ND (0.09)	ND (0.14)	ND (0.14)	ND (0.16)	0.64	ND (0.12)	ND (0.14)
1,2-Dibromo-3-chloropropane (DBCP)			ND (0.19)	ND (0.18)	ND (0.31)	ND (0.30)	ND (0.33)	ND (0.29)	ND (0.25)	ND (0.30)
1,2-Dibromoethane (Ethylene Dibromide)			ND (0.10)	ND (0.09)	ND (0.15)	ND (0.15)	ND (0.17)	ND (0.14)	ND (0.13)	ND (0.15)
1,2-Dichlorobenzene	500000		ND (0.09)	ND (0.08)	ND (0.14)	ND (0.14)	ND (0.15)	ND (0.13)	ND (0.12)	ND (0.14)
1,2-Dichloroethane	30000		ND (0.12)	ND (0.11)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.18)	ND (0.16)	ND (0.18)
1,2-Dichloroethene (total)			-	-	-	-	-	-	-	-
1,2-Dichloropropane			ND (0.11)	ND (0.10)	ND (0.18)	ND (0.17)	ND (0.19)	ND (0.16)	ND (0.15)	ND (0.17)
1,3,5-Trimethylbenzene	190000		ND (0.08)	ND (0.07)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.10)	ND (0.12)
1,3-Dichlorobenzene	280000		ND (0.10)	ND (0.10)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.16)	ND (0.14)	ND (0.16)
1,4-Dichlorobenzene	130000		ND (0.09)	ND (0.08)	ND (0.14)	ND (0.14)	ND (0.15)	ND (0.13)	ND (0.12)	ND (0.14)
1,4-Dioxane	130000		ND (6.9)	ND (6.6)	ND (11)	ND (11) J	ND (12)	ND (10)	ND (9.2)	ND (11)
2-Butanone (Methyl Ethyl Ketone)	500000		ND (0.33)	ND (0.32)	ND (0.54)	ND (0.53)	ND (0.58)	ND (0.50)	ND (0.44)	ND (0.52)
2-Hexanone			ND (0.32)	ND (0.30)	ND (0.52)	ND (0.51)	ND (0.56)	ND (0.48)	ND (0.43)	ND (0.50)
2-Phenylbutane (sec-Butylbenzene)	500000		ND (0.10)	ND (0.10)	ND (0.17)	ND (0.16)	ND (0.18)	14 J	ND (0.14)	ND (0.16)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)			ND (0.12)	ND (0.11)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.18)	ND (0.16)	ND (0.18)
Acetone	500000		ND (1.1)	4.3 J	2.3 J	ND (1.7)	1.9 J	5.6	ND (1.5)	ND (1.7)
Benzene	44000		ND (0.09)	ND (0.09)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.14)	ND (0.12)	ND (0.14)
Bromodichloromethane			ND (0.15)	ND (0.14)	ND (0.24)	ND (0.23)	ND (0.26)	ND (0.22)	ND (0.20)	ND (0.23)
Bromoform			ND (0.11)	ND (0.11)	ND (0.18)	ND (0.18)	ND (0.20)	ND (0.17)	ND (0.15)	ND (0.18)
Bromomethane (Methyl Bromide)			ND (0.16)	ND (0.16)	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.24)	ND (0.22)	ND (0.25)
Carbon disulfide			ND (0.53) J	ND (0.50) J	ND (0.86) J	ND (0.84)	ND (0.92)	ND (0.80)	ND (0.71) J	ND (0.83) J
Carbon tetrachloride	22000		ND (0.16)	ND (0.16)	ND (0.27)	ND (0.26)	ND (0.29)	ND (0.25)	ND (0.22)	ND (0.26)
Chlorobenzene	500000		ND (0.17)	ND (0.16)	ND (0.27)	ND (0.26)	ND (0.29)	ND (0.25)	ND (0.22)	ND (0.26)
Chlorobromomethane			ND (0.17)	ND (0.16)	ND (0.28)	ND (0.27)	ND (0.30)	ND (0.26)	ND (0.23)	ND (0.27)
Chloroethane			ND (0.15)	ND (0.14)	ND (0.24) J	ND (0.24)	ND (0.26)	ND (0.23)	ND (0.20) J	ND (0.24) J
Chloroform (Trichloromethane)	350000		ND (0.18)	ND (0.17)	ND (0.29)	ND (0.28)	ND (0.31)	ND (0.27)	ND (0.24)	ND (0.28)
Chloromethane (Methyl Chloride)			ND (0.21)	ND (0.20)	ND (0.34) J	ND (0.33)	ND (0.36)	ND (0.32)	ND (0.28) J	ND (0.33) J
cis-1,2-Dichloroethene	500000		ND (0.16)	0.20 J	0.35 J	ND (0.26)	ND (0.28)	ND (0.25)	1.2	ND (0.26)
cis-1,3-Dichloropropene			ND (0.11)	ND (0.10)	ND (0.18)	ND (0.18)	ND (0.19)	ND (0.17)	ND (0.15)	ND (0.17)
Cyclohexane			ND (0.21)	ND (0.20)	ND (0.34)	ND (0.33)	ND (0.36)	ND (0.31)	ND (0.28)	ND (0.33)
Cymene (p-Isopropyltoluene)			ND (0.10)	ND (0.09)	ND (0.16)	ND (0.15)	ND (0.17)	2.1 J	ND (0.13)	ND (0.15)
Dibromochloromethane			ND (0.08)	ND (0.08)	ND (0.14)	ND (0.13)	ND (0.15)	ND (0.13)	ND (0.11)	ND (0.13)
Dichlorodifluoromethane (CFC-12)			ND (0.24)	ND (0.23)	ND (0.39) J	ND (0.38) J	ND (0.42)	ND (0.36)	ND (0.32) J	ND (0.38) J
Ethylbenzene	390000		ND (0.08)	ND (0.08)	ND (0.13)	ND (0.13)	ND (0.14)	0.44	ND (0.11)	ND (0.13)
Isopropylbenzene (Cumene)			ND (0.09)	ND (0.09)	ND (0.15)	ND (0.15)	ND (0.16)	5.1 J	ND (0.12)	ND (0.15)
m,p-Xylenes			ND (0.17)	ND (0.16)	ND (0.27)	ND (0.27)	ND (0.29)	4.3 J	ND (0.22)	ND (0.26)
Methyl acetate			ND (0.22)	ND (0.21)	ND (0.36)	ND (0.35)	ND (0.39)	ND (0.34)	ND (0.30)	ND (0.35)
Methyl cyclohexane			ND (0.12)	ND (0.11)	ND (0.19)	ND (0.18)	ND (0.20)	7.3 J	ND (0.15)	ND (0.18)
Methyl Tert Butyl Ether	500000		ND (0.07)	ND (0.07)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.11)	ND (0.10)	ND (0.12)
Methylene chloride	500000		ND (0.79)	ND (0.76)	ND (1.3)	ND (1.2)	ND (1.4)	ND (1.2)	ND (1.0)	ND (1.2)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1712801-02	L1712801-03	L1717921-11	L1717921-14	L1718140-06	L1718729-01	L1717921-10	L1717921-12
		Sample ID	4347-042117-0850	4347-042117-0903	4542-170531-1515	4542-170531-1550	4542-170601-1245	4542-170606-0930	4542-170531-1450	4542-170531-1525
		Location	Stormwater Pipe Removal - Sidewall West	Stormwater Pipe Removal - Bottom	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A North Sidewall	Area 2A South Sidewall	Area 2A South Sidewall
		Sample Depth (ft.)	1.0-1.5	4.5-5.0	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5
		Sample Date	4/21/2017	4/21/2017	05/31/2017	05/31/2017	06/01/2017	06/06/2017	05/31/2017	05/31/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Naphthalene	500000		ND (0.07)	ND (0.06)	ND (0.11)	ND (0.10)	ND (0.12)	ND (0.10)	ND (0.09)	ND (0.10)
n-Butylbenzene	500000		ND (0.11)	ND (0.10)	ND (0.18)	ND (0.17)	ND (0.19)	22 J	ND (0.15)	ND (0.17)
n-Propylbenzene	500000		ND (0.10)	ND (0.10)	ND (0.17)	ND (0.16)	ND (0.18)	9.0 J	ND (0.14)	ND (0.16)
o-Xylene			ND (0.16)	ND (0.16)	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.24)	ND (0.22)	ND (0.25)
Styrene			ND (0.19)	ND (0.18)	ND (0.31)	ND (0.30)	ND (0.33)	ND (0.29)	ND (0.26)	ND (0.30)
Tetrachloroethene	150000		ND (0.14)	ND (0.14)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.22)	ND (0.19)	ND (0.23)
Toluene	500000		ND (0.09)	ND (0.09)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.14)	ND (0.12)	ND (0.15)
trans-1,2-Dichloroethene	500000		ND (0.12)	ND (0.11)	ND (0.19)	ND (0.18)	ND (0.20)	ND (0.17)	ND (0.15)	ND (0.18)
trans-1,3-Dichloropropene			ND (0.10)	ND (0.10)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.15)	ND (0.13)	ND (0.16)
Trichloroethene	200000		ND (0.14)	0.76	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.22)	0.44 J	ND (0.23)
Trichlorofluoromethane (CFC-11)			ND (0.20)	ND (0.19)	ND (0.32)	ND (0.32)	ND (0.35)	ND (0.30)	ND (0.27)	ND (0.31)
Trifluorotrichloroethane (Freon 113)			ND (0.25)	ND (0.24)	ND (0.40)	ND (0.39)	ND (0.43)	ND (0.37)	ND (0.33)	ND (0.39)
Vinyl chloride	13000		ND (0.15)	ND (0.14)	ND (0.24) J	ND (0.24)	ND (0.26)	ND (0.23)	ND (0.20) J	ND (0.24) J
Xylene (total)	500000		ND (0.16)	ND (0.16)	ND (0.26)	ND (0.26)	ND (0.28)	4.3 J	ND (0.22)	ND (0.25)

Notes and Abbreviations:

1. Results were compared to the Restricted Use Soil Cleanup Objective (SCO)
for Commercial (NYSDEC, Table 375-6.8(b), December 2006).

2. Results in dark gray shading exceed applicable criteria.

3. ND (#): Result is not detected above the indicated reporting limit.

J: Estimated result

J+: Estimated result, biased high

R: Rejected

4. Results in **bold** are detected.

* - Bottom confirmation samples were collected before excavation activities using a
geoprobe.

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID Sample ID	L1717921-15 4542-170531-1600	L1718140-08 4542-170601-1315	L1718140-07 4542-170601-1300	L1718140-02 4542-170601-1000	L1718140-05 4542-170601-1115	L1718140-09 1234-170601-0001	L1718140-01 4542-170601-0945	L1718140-04 4542-170601-1100
	NYSDEC Part 375 SCO (Commercial)	Location Sample Depth (ft.) Sample Date Sample Type	Area 2A South Sidewall 1.0-1.5 05/31/2017 Normal	Area 2A South Sidewall 1.0-1.5 06/01/2017 Normal	Area 2A West End Sidewall 1.0-1.5 06/01/2017 Normal	Area 2B Bottom 5.0-5.5 06/01/2017 Normal	Area 2B NE Sidewall 4.5-5.0 06/01/2017 Normal	Area 2B NE Sidewall 4.5-5.0 06/01/2017 Duplicate	Area 2B NW Sidewall 4.5-5.0 06/01/2017 Normal	Area 2B SE Sidewall 4.5-5.0 06/01/2017 Normal
Inorganic Compounds (mg/kg)										
Aluminum			3,770 J	3,800	5,810	3,690	4,040	5,640	3,790	4,140
Antimony			ND (0.320)	ND (0.333)	ND (0.331)	ND (0.330)	ND (0.335)	ND (0.322)	ND (0.344)	ND (0.334)
Arsenic	16		3.73	2.79	3.56	3.08	3.33	3.96	3.49	3.24
Barium	400		37.3	32.2	41.2	29.3	34.8	42.2	32.5	32.6
Beryllium	590		ND (0.028)	0.149 J	0.279 J	0.139 J	0.176 J	0.288 J	0.172 J	0.211 J
Cadmium	9.3		0.261 J	0.289 J	0.366 J	0.260 J	0.255 J	0.288 J	0.244 J	0.290 J
Calcium			50,300 J	41,900	48,400	44,200	46,700	33,800	49,300	56,400
Chromium			6.84	6.84	8.97	6.29	6.91	8.43	6.65	7.47
Cobalt			3.86	3.49	4.1	2.46	3.81	4.23	4	3.97
Copper	270		10.4	12.2	10.4	8.41	9.04	10.3	10.7	9.66
Iron			10,300 J	9,490	12,000	9,260	10,200	11,400	10,200	10,300
Lead	1000		5.76	5.01	7.48	5.99	5.63	6.19	6.43	5.76
Magnesium			13,800 J	13,400	14,100	14,600	14,800	11,300	18,100	19,200
Manganese	10000		274 J	273	295	268	320	272	342	308
Mercury	2.8		ND (0.02)	ND (0.02)	0.02 J	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Nickel	310		8.15	7.6	9.13	6.39	8.63	10.2	8.21	8.34
Potassium			478	578	533	600	587	600	566	704
Selenium	1500		ND (0.217)	0.324 J	0.802 J	0.477 J	0.696 J	0.764 J	0.823 J	0.308 J
Silver	1500		ND (0.238)	ND (0.248)	ND (0.247)	ND (0.246)	ND (0.249)	ND (0.240)	ND (0.256)	ND (0.249)
Sodium			ND (2.65)	114 J	238	164 J	129 J	297	143 J	422
Thallium			ND (0.265) J	ND (0.276)	ND (0.274)	ND (0.273)	ND (0.277)	ND (0.267)	ND (0.285)	ND (0.277)
Vanadium			11.5	11	14	10.7	11.5	12.9	11.7	12.2
Zinc	10000		43.2	43.6	49.7	33.4	41.9	45.4	37.4	47.2
PCBs (ug/kg)										
Aroclor-1016 (PCB-1016)			ND (2.78)	ND (2.84)	ND (2.90)	ND (2.90)	ND (2.96)	ND (2.91)	ND (2.88)	ND (2.94)
Aroclor-1221 (PCB-1221)			ND (3.24)	ND (3.32)	ND (3.38)	ND (3.38)	ND (3.45)	ND (3.39)	ND (3.36)	ND (3.43)
Aroclor-1232 (PCB-1232)			ND (4.12)	ND (4.22)	ND (4.30)	ND (4.30)	ND (4.39)	ND (4.31)	ND (4.28)	ND (4.36)
Aroclor-1242 (PCB-1242)			ND (4.30)	ND (4.40)	ND (4.49)	ND (4.49)	ND (4.58)	ND (4.50)	ND (4.46)	ND (4.55)
Aroclor-1248 (PCB-1248)			ND (2.97)	ND (3.04)	ND (3.09)	ND (3.10)	ND (3.16)	ND (3.10)	ND (3.08)	ND (3.14)
Aroclor-1254 (PCB-1254)			9.11 J	ND (2.96)	26.7 J	ND (3.02)	ND (3.08)	ND (3.02)	ND (3.00)	23.2 J
Aroclor-1260 (PCB-1260)			ND (2.68)	ND (2.74)	ND (2.79)	ND (2.80)	ND (2.85)	ND (2.80)	ND (2.78)	ND (2.84)
Aroclor-1262 (PCB-1262)			ND (1.74)	ND (1.78)	ND (1.82)	ND (1.82)	ND (1.86)	ND (1.82)	ND (1.81)	ND (1.84)
Aroclor-1268 (PCB-1268)			ND (5.10)	ND (5.22)	ND (5.32)	ND (5.32)	ND (5.43)	ND (5.33)	ND (5.29)	ND (5.40)
Polychlorinated biphenyls (PCBs)	1000		9.11 J	ND (1.78)	26.7 J	ND (1.82)	ND (1.86)	ND (1.82)	ND (1.81)	23.2 J
Semi-Volatile Organic Compounds (ug/kg)										
1,2,4,5-Tetrachlorobenzene			ND (19)	ND (20)	ND (20)	ND (19)	ND (19)	ND (19)	ND (20)	ND (20)
2,2'-oxybis(1-Chloropropane)			ND (32)	ND (32)	ND (32)	ND (31)	ND (31)	ND (31)	ND (32)	ND (32)
2,3,4,6-Tetrachlorophenol			ND (37)	ND (38)	ND (38)	ND (37)	ND (37)	ND (37)	ND (38)	ND (38)
2,4,5-Trichlorophenol			ND (35)	ND (36)	ND (36)	ND (35)	ND (35)	ND (35)	ND (36)	ND (36)
2,4,6-Trichlorophenol			ND (35)	ND (36)	ND (36)	ND (35)	ND (35)	ND (35)	ND (35)	ND (36)
2,4-Dichlorophenol			ND (30)	ND (30)	ND (30)	ND (30)	ND (29)	ND (29)	ND (30)	ND (30)
2,4-Dimethylphenol			ND (61)	ND (62)	ND (62)	ND (61)	ND (60)	ND (60)	ND (62)	ND (62)
2,4-Dinitrophenol			ND (86)	ND (87)	ND (88)	ND (86)	ND (85)	ND (85)	ND (87)	ND (87)
2,4-Dinitrotoluene			ND (37)	ND (37)	ND (38)	ND (37)	ND (37)	ND (36)	ND (37)	ND (37)
2,6-Dinitrotoluene			ND (32)	ND (32)	ND (32)	ND (32)	ND (31)	ND (31)	ND (32)	ND (32)
2-Chloronaphthalene			ND (18)	ND (18)	ND (19)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)
2-Chlorophenol			ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)
2-Methylnaphthalene			ND (22)	ND (23)	ND (23)	ND (22)	ND (22)	ND (22)	ND (22)	ND (23)
2-Methylphenol (o-Cresol)	500000		ND (29)	ND (29)	ND (29)	ND (28)	ND (28)	ND (28)	ND (29)	ND (29)
2-Nitroaniline			ND (36) J	ND (36)	ND (36)	ND (36)	ND (35)	ND (35)	ND (36)	ND (36)
2-Nitrophenol			ND (70) J	ND (70)	ND (71)	ND (69)	ND (69)	ND (69)	ND (70)	ND (70)
3,3'-Dichlorobenzidine			ND (49)	ND (50)	ND (50)	ND (49)	ND (49)	ND (49)	ND (50)	ND (50)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID Sample ID	L1717921-15 4542-170531-1600	L1718140-08 4542-170601-1315	L1718140-07 4542-170601-1300	L1718140-02 4542-170601-1000	L1718140-05 4542-170601-1115	L1718140-09 1234-170601-0001	L1718140-01 4542-170601-0945	L1718140-04 4542-170601-1100
	NYSDEC Part 375 SCO (Commercial)	Location Sample Depth (ft.) Sample Date Sample Type	Area 2A South Sidewall 1.0-1.5 05/31/2017 Normal	Area 2A South Sidewall 1.0-1.5 06/01/2017 Normal	Area 2A West End Sidewall 1.0-1.5 06/01/2017 Normal	Area 2B Bottom 5.0-5.5 06/01/2017 Normal	Area 2B NE Sidewall 4.5-5.0 06/01/2017 Normal	Area 2B NE Sidewall 4.5-5.0 06/01/2017 Duplicate	Area 2B NW Sidewall 4.5-5.0 06/01/2017 Normal	Area 2B SE Sidewall 4.5-5.0 06/01/2017 Normal
3-Methylphenol	500000		ND (29)	ND (29)	ND (29)	ND (29)	ND (29)	ND (29)	ND (29)	ND (29)
3-Nitroaniline			ND (35)	ND (35)	ND (36)	ND (35)	ND (34)	ND (34)	ND (35)	ND (35)
4,6-Dinitro-2-methylphenol			ND (89)	ND (90)	ND (90)	ND (88)	ND (88)	ND (88)	ND (90)	ND (90)
4-Bromophenyl phenyl ether			ND (28)	ND (28)	ND (29)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)
4-Chloro-3-methylphenol			ND (28)	ND (28)	ND (28)	ND (27)	ND (27)	ND (27)	ND (28)	ND (28)
4-Chloroaniline			ND (34)	ND (34)	ND (34)	ND (34)	ND (33)	ND (33)	ND (34)	ND (34)
4-Chlorophenyl phenyl ether			ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
4-Nitroaniline			ND (77)	ND (78)	ND (78)	ND (76)	ND (76)	ND (76)	ND (77)	ND (78)
4-Nitrophenol			ND (76)	ND (76)	ND (77)	ND (75)	ND (75)	ND (74)	ND (76)	ND (76)
Acenaphthene	500000		ND (19)	ND (19)	ND (20)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
Acenaphthylene	500000		ND (28)	ND (29)	ND (29)	ND (28)	ND (28)	ND (28)	ND (29)	ND (29)
Acetophenone			ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)
Anthracene	500000		ND (36)	ND (36)	ND (37)	ND (36)	ND (36)	ND (36)	ND (36)	ND (36)
Atrazine			ND (65)	ND (66)	ND (66)	ND (64)	ND (64)	ND (64)	ND (65)	ND (66)
Benzaldehyde			ND (50)	ND (50)	ND (51)	ND (50)	ND (49)	ND (49)	ND (50)	ND (51)
Benzo(a)anthracene	5600		ND (21)	ND (21)	ND (21)	ND (21)	ND (21)	ND (20)	ND (21)	ND (21)
Benzo(a)pyrene	1000		ND (45)	ND (46)	ND (46)	ND (45)	ND (45)	ND (44)	ND (46)	ND (46)
Benzo(b)fluoranthene	5600		ND (31)	ND (32)	ND (32)	ND (31)	ND (31)	ND (31)	ND (31)	ND (32)
Benzo(g,h,i)perylene	500000		ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (21)	ND (22)	ND (22)
Benzo(k)fluoranthene	56000		ND (30)	ND (30)	ND (30)	ND (30)	ND (29)	ND (29)	ND (30)	ND (30)
Biphenyl			ND (43)	ND (43)	ND (44)	ND (43)	ND (42)	ND (42)	ND (43)	ND (43)
bis(2-Chloroethoxy)methane			ND (18)	ND (19)	ND (19)	ND (18)	ND (18)	ND (18)	ND (19)	ND (19)
bis(2-Chloroethyl)ether			ND (25)	ND (25)	ND (26)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)
bis(2-Ethylhexyl)phthalate			ND (64)	79 J	87 J	93 J	72 J	ND (63)	ND (65)	ND (65)
Butyl benzylphthalate			ND (47)	ND (47)	ND (47)	ND (46)	ND (46)	ND (46)	ND (47)	ND (47)
Caprolactam			ND (56)	ND (57)	ND (57)	ND (56)	ND (56)	ND (56)	ND (57)	ND (57)
Carbazole			ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)
Chrysene	56000		ND (19)	ND (19)	ND (20)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
Dibenz(a,h)anthracene	560		ND (21)	ND (22)	ND (22)	ND (21)	ND (21)	ND (21)	ND (22)	ND (22)
Dibenzofuran	350000		ND (18)	ND (18)	ND (18)	ND (17)	ND (17)	ND (17)	ND (18)	ND (18)
Diethyl phthalate			ND (17)	ND (17)	ND (17)	ND (17)	ND (17)	ND (17)	ND (17)	ND (17)
Dimethyl phthalate			ND (39)	ND (39)	ND (40)	ND (39)	ND (38)	ND (38)	ND (39)	ND (39)
Di-n-butylphthalate			ND (35)	ND (36)	ND (36)	ND (35)	ND (35)	ND (35)	ND (35)	ND (36)
Di-n-octyl phthalate			ND (63)	ND (64)	ND (64)	ND (63)	ND (62)	ND (62)	ND (64)	ND (64)
Fluoranthene	500000		ND (21)	ND (21)	ND (22)	ND (21)	ND (21)	ND (21)	ND (21)	22 J
Fluorene	500000		ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)
Hexachlorobenzene	6000		ND (21)	ND (21)	ND (21)	ND (21)	ND (20)	ND (20)	ND (21)	ND (21)
Hexachlorobutadiene			ND (27)	ND (27)	ND (28)	ND (27)	ND (27)	ND (27)	ND (27)	ND (27)
Hexachlorocyclopentadiene			ND (170)	ND (170) R	ND (170) R	ND (170) R	ND (160) R	ND (160) R	ND (170) R	ND (170) R
Hexachloroethane			ND (30)	ND (30)	ND (30)	ND (30)	ND (30)	ND (30)	ND (30)	ND (30)
Indeno(1,2,3-cd)pyrene	5600		ND (26)	ND (26)	ND (26)	ND (26)	ND (26)	ND (25)	ND (26)	ND (26)
Isophorone			ND (24)	ND (24)	ND (24)	ND (24)	ND (24)	ND (24)	ND (24)	ND (24)
Naphthalene	500000		ND (22)	ND (23)	ND (23)	ND (22)	ND (22)	ND (22)	ND (23)	ND (23)
Nitrobenzene	69000		ND (27)	ND (28)	ND (28)	ND (27)	ND (27)	ND (27)	ND (28)	ND (28)
N-Nitrosodi-n-propylamine			ND (28)	ND (29)	ND (29)	ND (28)	ND (28)	ND (28)	ND (29)	ND (29)
N-Nitrosodiphenylamine			ND (21)	ND (21)	ND (21)	ND (21)	ND (21)	ND (21)	ND (21)	ND (21)
Pentachlorophenol	6700		ND (41)	ND (41)	ND (41)	ND (40)	ND (40)	ND (40)	ND (41)	ND (41)
Phenanthrene	500000		ND (22)	ND (23)	ND (23)	ND (22)	ND (22)	ND (22)	ND (23)	ND (23)
Phenol	500000		ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)
Pyrene	500000		ND (18)	ND (19)	ND (19)	ND (18)	ND (18)	ND (18)	ND (18)	ND (19)
Volatile Organic Compounds (ug/kg)										
1,1,1-Trichloroethane	500000		ND (0.28)	ND (0.26)	ND (0.28)	ND (15)	ND (0.27)	ND (0.28)	ND (0.27)	ND (0.29)
1,1,2,2-Tetrachloroethane			ND (0.24)	ND (0.22)	ND (0.24)	ND (13)	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.24)
1,1,2-Trichloroethane			ND (0.25)	ND (0.23)	ND (0.25)	ND (14)	ND (0.24)	ND (0.25)	ND (0.24)	ND (0.26)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID	L1717921-15	L1718140-08	L1718140-07	L1718140-02	L1718140-05	L1718140-09	L1718140-01	L1718140-04
	NYSDEC Part 375 SCO (Commercial)	Sample ID	4542-170531-1600	4542-170601-1315	4542-170601-1300	4542-170601-1000	4542-170601-1115	1234-170601-0001	4542-170601-0945	4542-170601-1100
		Location	Area 2A South Sidewall	Area 2A South Sidewall	Area 2A West End Sidewall	Area 2B Bottom	Area 2B NE Sidewall	Area 2B NE Sidewall	Area 2B NW Sidewall	Area 2B SE Sidewall
		Sample Depth (ft.)	1.0-1.5	1.0-1.5	1.0-1.5	5.0-5.5	4.5-5.0	4.5-5.0	4.5-5.0	4.5-5.0
		Sample Date	05/31/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal
1,1-Dichloroethane	240000		ND (0.22)	ND (0.20)	ND (0.21)	ND (12)	ND (0.21)	ND (0.22)	ND (0.21)	ND (0.22)
1,1-Dichloroethene	500000		ND (0.30)	ND (0.28)	ND (0.29)	ND (16)	ND (0.29)	ND (0.30)	ND (0.28)	ND (0.30)
1,2,3-Trichlorobenzene			ND (0.20)	ND (0.19)	ND (0.20)	ND (11)	ND (0.20)	ND (0.20)	ND (0.19)	ND (0.20)
1,2,4-Trichlorobenzene			ND (0.17)	ND (0.16)	ND (0.17)	ND (9.5)	ND (0.17)	ND (0.17)	ND (0.16)	ND (0.18)
1,2,4-Trimethylbenzene	190000		ND (0.15)	ND (0.14)	ND (0.15)	ND (8.2)	ND (0.14)	ND (0.15)	ND (0.14)	ND (0.15)
1,2-Dibromo-3-chloropropane (DBCP)			ND (0.32)	ND (0.30)	ND (0.31)	ND (18)	ND (0.31)	ND (0.32)	ND (0.30)	ND (0.32)
1,2-Dibromoethane (Ethylene Dibromide)			ND (0.16)	ND (0.15)	ND (0.16)	ND (8.8)	ND (0.16)	ND (0.16)	ND (0.15)	ND (0.16)
1,2-Dichlorobenzene	500000		ND (0.14)	ND (0.14)	ND (0.14)	ND (8.0)	ND (0.14)	1.2 J	ND (0.14)	ND (0.15)
1,2-Dichloroethane	30000		ND (0.20)	ND (0.18)	ND (0.19)	ND (11)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)
1,2-Dichloroethene (total)			-	-	-	-	-	-	-	-
1,2-Dichloropropane			ND (0.18)	ND (0.17)	ND (0.18)	ND (10)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.19)
1,3,5-Trimethylbenzene	190000		ND (0.13)	ND (0.12)	ND (0.13)	ND (7.1)	ND (0.13)	ND (0.13)	ND (0.12)	ND (0.13)
1,3-Dichlorobenzene	280000		ND (0.17)	ND (0.16)	ND (0.17)	ND (9.6)	ND (0.17)	ND (0.18)	ND (0.17)	ND (0.18)
1,4-Dichlorobenzene	130000		ND (0.14)	ND (0.14)	ND (0.14)	ND (8.0)	ND (0.14)	0.17 J	ND (0.14)	ND (0.15)
1,4-Dioxane	130000		ND (11) J	ND (11)	ND (11)	ND (640)	ND (11)	ND (12)	ND (11)	ND (12)
2-Butanone (Methyl Ethyl Ketone)	500000		ND (0.55)	ND (0.52)	ND (0.54)	ND (30)	ND (0.54)	ND (0.56)	ND (0.53)	ND (0.56)
2-Hexanone			ND (0.53)	ND (0.50)	ND (0.52)	ND (29)	ND (0.52)	ND (0.54)	ND (0.51)	ND (0.54)
2-Phenylbutane (sec-Butylbenzene)	500000		ND (0.17)	ND (0.16)	ND (0.17)	ND (9.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)			ND (0.19)	ND (0.18)	ND (0.19)	ND (11)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)
Acetone	500000		ND (1.8)	ND (1.7)	ND (1.8)	ND (100)	2.5 J	ND (1.8)	ND (1.8)	ND (1.9)
Benzene	44000		ND (0.15)	ND (0.14)	ND (0.15)	ND (8.5)	ND (0.15)	ND (0.16)	ND (0.15)	ND (0.16)
Bromodichloromethane			ND (0.24)	ND (0.23)	ND (0.24)	ND (14)	ND (0.24)	ND (0.25)	ND (0.24)	ND (0.25)
Bromoform			ND (0.19)	ND (0.18)	ND (0.19)	ND (10)	ND (0.18)	ND (0.19)	ND (0.18)	ND (0.19)
Bromomethane (Methyl Bromide)			ND (0.27)	ND (0.25)	ND (0.27)	37 J	ND (0.26)	ND (0.27)	ND (0.26)	ND (0.28)
Carbon disulfide			ND (0.88)	ND (0.82)	ND (0.87)	ND (49)	ND (0.86)	ND (0.89)	ND (0.84)	ND (0.90)
Carbon tetrachloride	22000		ND (0.27)	ND (0.26)	ND (0.27)	ND (15)	ND (0.27)	ND (0.28)	ND (0.26)	ND (0.28)
Chlorobenzene	500000		ND (0.28)	ND (0.26)	ND (0.27)	ND (15)	ND (0.27)	ND (0.28)	ND (0.27)	ND (0.28)
Chlorobromomethane			ND (0.28)	ND (0.27)	ND (0.28)	ND (16)	ND (0.28)	ND (0.29)	ND (0.27)	ND (0.29)
Chloroethane			ND (0.25)	ND (0.24)	ND (0.25)	ND (14)	ND (0.25)	ND (0.25)	ND (0.24)	ND (0.26)
Chloroform (Trichloromethane)	350000		ND (0.29)	ND (0.28)	ND (0.29)	ND (16)	ND (0.29)	ND (0.30)	ND (0.28)	ND (0.30)
Chloromethane (Methyl Chloride)			ND (0.35)	ND (0.33)	ND (0.34)	ND (19)	ND (0.34)	ND (0.35)	ND (0.33)	ND (0.36)
cis-1,2-Dichloroethene	500000		0.39 J	ND (0.26)	ND (0.27)	ND (15)	ND (0.27)	0.73 J	1	8.5
cis-1,3-Dichloropropene			ND (0.18)	ND (0.17)	ND (0.18)	ND (10)	ND (0.18)	ND (0.19)	ND (0.18)	ND (0.19)
Cyclohexane			ND (0.34)	ND (0.32)	ND (0.34)	ND (19)	ND (0.34)	ND (0.35)	ND (0.33)	ND (0.35)
Cymene (p-Isopropyltoluene)			ND (0.16)	ND (0.15)	ND (0.16)	ND (8.9)	ND (0.16)	ND (0.16)	ND (0.15)	ND (0.16)
Dibromochloromethane			ND (0.14)	ND (0.13)	ND (0.14)	ND (7.8)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)
Dichlorodifluoromethane (CFC-12)			ND (0.40) J	ND (0.37)	ND (0.39)	ND (22)	ND (0.39)	ND (0.40)	ND (0.38)	ND (0.41)
Ethylbenzene	390000		ND (0.14)	ND (0.13)	ND (0.13)	ND (7.5)	ND (0.13)	ND (0.14)	ND (0.13)	ND (0.14)
Isopropylbenzene (Cumene)			ND (0.15)	ND (0.14)	ND (0.15)	ND (8.6)	ND (0.15)	ND (0.16)	ND (0.15)	ND (0.16)
m,p-Xylenes			ND (0.28)	ND (0.26)	ND (0.28)	ND (16)	ND (0.27)	ND (0.28)	ND (0.27)	ND (0.29)
Methyl acetate			ND (0.37)	ND (0.35)	ND (0.36)	ND (20)	ND (0.36)	ND (0.37)	ND (0.36)	ND (0.38)
Methyl cyclohexane			ND (0.19)	ND (0.18)	ND (0.19)	ND (11)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.20)
Methyl Tert Butyl Ether	500000		ND (0.12)	ND (0.11)	ND (0.12)	ND (6.8)	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.12)
Methylene chloride	500000		ND (1.3)	ND (1.2)	ND (1.3)	ND (73)	ND (1.3)	ND (1.3)	ND (1.3)	ND (1.4)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1717921-15	L1718140-08	L1718140-07	L1718140-02	L1718140-05	L1718140-09	L1718140-01	L1718140-04
		Sample ID	4542-170531-1600	4542-170601-1315	4542-170601-1300	4542-170601-1000	4542-170601-1115	1234-170601-0001	4542-170601-0945	4542-170601-1100
		Location	Area 2A South Sidewall	Area 2A South Sidewall	Area 2A West End Sidewall	Area 2B Bottom	Area 2B NE Sidewall	Area 2B NE Sidewall	Area 2B NW Sidewall	Area 2B SE Sidewall
		Sample Depth (ft.)	1.0-1.5	1.0-1.5	1.0-1.5	5.0-5.5	4.5-5.0	4.5-5.0	4.5-5.0	4.5-5.0
		Sample Date	05/31/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017	06/01/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal
Naphthalene	500000		ND (0.11)	ND (0.10)	ND (0.11)	ND (6.1)	ND (0.11)	ND (0.11)	ND (0.10)	ND (0.11)
n-Butylbenzene	500000		ND (0.18)	ND (0.17)	ND (0.18)	ND (10)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.19)
n-Propylbenzene	500000		ND (0.17)	ND (0.16)	ND (0.17)	ND (9.5)	ND (0.17)	ND (0.17)	ND (0.16)	ND (0.18)
o-Xylene			ND (0.27)	ND (0.25)	ND (0.27)	ND (15)	ND (0.26)	ND (0.27)	ND (0.26)	ND (0.28)
Styrene			ND (0.32)	ND (0.30)	ND (0.32)	ND (18)	ND (0.31)	ND (0.32)	ND (0.31)	ND (0.33)
Tetrachloroethene	150000		ND (0.24)	ND (0.23)	ND (0.24)	ND (13)	ND (0.24)	0.63 J	ND (0.23)	1.4
Toluene	500000		ND (0.16)	ND (0.14)	ND (0.15)	ND (8.6)	ND (0.15)	ND (0.16)	ND (0.15)	ND (0.16)
trans-1,2-Dichloroethene	500000		ND (0.19)	ND (0.18)	ND (0.19)	ND (11)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.20)
trans-1,3-Dichloropropene			ND (0.16)	ND (0.16)	ND (0.16)	ND (9.2)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.17)
Trichloroethene	200000		0.34 J	ND (0.23)	ND (0.24)	3,700 J+	7.7 J+	140 J+	170 J+	120 J+
Trichlorofluoromethane (CFC-11)			ND (0.33)	ND (0.31)	ND (0.33)	ND (18)	ND (0.33)	ND (0.34)	ND (0.32)	ND (0.34)
Trifluorotrichloroethane (Freon 113)			ND (0.41)	ND (0.38)	ND (0.40)	ND (23)	ND (0.40)	ND (0.41)	ND (0.39)	ND (0.42)
Vinyl chloride	13000		ND (0.25)	ND (0.24)	ND (0.25)	ND (14)	ND (0.25)	ND (0.25)	0.44 J	ND (0.26)
Xylene (total)	500000		ND (0.27)	ND (0.25)	ND (0.27)	ND (15)	ND (0.26)	ND (0.27)	ND (0.26)	ND (0.28)

Notes and Abbreviations:

1. Results were compared to the Restricted Use Soil Cleanup Objective (SCO)
for Commercial (NYSDEC, Table 375-6.8(b), December 2006).

2. Results in dark gray shading exceed applicable criteria.

3. ND (#): Result is not detected above the indicated reporting limit.

J: Estimated result

J+: Estimated result, biased high

R: Rejected

4. Results in **bold** are detected.

* - Bottom confirmation samples were collected before excavation activities using a
geoprobe.

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1718140-03 4542-170601-1015	L1717921-01 4542-170531-0840	L1717921-02 4542-170531-0850	L1717921-04 4542-170531-1010	L1717921-06 4542-170531-1305	L1717921-03 4542-170531-1000	L1717921-05 4542-170531-1115	L1717921-07 4542-170531-1320
		Location	Area 2B Sidewall	Area 2C East End Sidewall	Area 2C North Sidewall	Area 2C North Sidewall	Area 2C North Sidewall	Area 2C South Sidewall	Area 2C South Sidewall	Area 2C South Sidewall
		Sample Depth (ft.)	4.5-5.0	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	3.0-3.5	3.0-3.5	1.0-1.5
		Sample Date	06/01/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Inorganic Compounds (mg/kg)										
Aluminum			4,010	5,160 J	4,390 J	4,770 J	4,470 J	5,600 J	2,990 J	4,290 J
Antimony			ND (0.330)	ND (0.376)	ND (0.336)	ND (0.341)	ND (0.325)	ND (0.382)	ND (0.349)	ND (0.342)
Arsenic	16		3.2	4.19	2.46	2.67	2.7	3.53	2.15	4.25
Barium	400		34.1	36.4	44.5	41.2	41.9	37.9	27.1	34.6
Beryllium	590		0.200 J	0.129 J	0.088 J	0.099 J	0.094 J	0.131 J	0.037 J	0.090 J
Cadmium	9.3		0.278 J	ND (0.097)	ND (0.087)	ND (0.088)	ND (0.084)	ND (0.099)	ND (0.090)	ND (0.088)
Calcium			41,900	39,500 J	43,900 J	49,800 J	48,000 J	43,900 J	35,800 J	46,500 J
Chromium			7.72	8.71	8.88	7.79	8.53	8.64	5.25	7.05
Cobalt			4.2	3.86	3.34	3.97	3.84	4.64	2.35	4.06
Copper	270		9.2	15.4	13.4	11.7	11.3	13.9	8.4	13.3
Iron			10,400	11,500 J	9,770 J	11,000 J	10,600 J	11,100 J	8,720 J	11,800 J
Lead	1000		5.81	14.6	6.52	8.06	6.3	10.4	4.34 J	6.86
Magnesium			13,700	14,200 J	14,200 J	16,000 J	15,600 J	15,600 J	12,500 J	13,400 J
Manganese	10000		304	261 J	232 J	328 J	308 J	362 J	203 J	271 J
Mercury	2.8		ND (0.02)	0.03 J	ND (0.02)	ND (0.02)	ND (0.02)	0.02 J	ND (0.02)	ND (0.02)
Nickel	310		9.68	8.42	7.91	8.37	8.79	9.99	5.27	8.02
Potassium			556	546	627	694	629	693	437	561
Selenium	1500		0.660 J	ND (0.256)	ND (0.228)	ND (0.232)	ND (0.220)	ND (0.259)	0.377 J	ND (0.232)
Silver	1500		ND (0.246)	0.297 J	ND (0.250)	ND (0.254)	ND (0.242)	ND (0.284)	ND (0.260)	ND (0.255)
Sodium			157 J	211	ND (2.78)	ND (2.83)	ND (2.69)	381	468	430
Thallium			ND (0.274)	ND (0.312) J	ND (0.278) J	ND (0.283) J	ND (0.269) J	ND (0.317) J	ND (0.289) J	ND (0.284) J
Vanadium			11.5	13.5	11.9	12.5	12	13.2	10.1	13.4
Zinc	10000		47.6	65.4	49.4	87.2	42	43.6	25.1	54.4
PCBs (ug/kg)										
Aroclor-1016 (PCB-1016)			ND (2.80)	ND (3.30) J	ND (2.87) J	ND (2.98) J	ND (2.86) J	ND (3.37) J	ND (3.00) J	ND (2.87) J
Aroclor-1221 (PCB-1221)			ND (3.26)	ND (3.86)	ND (3.35)	ND (3.48)	ND (3.33)	ND (3.94)	ND (3.50)	ND (3.35)
Aroclor-1232 (PCB-1232)			ND (4.15)	ND (4.90)	ND (4.26)	ND (4.42)	ND (4.24)	ND (5.00)	ND (4.45)	ND (4.26)
Aroclor-1242 (PCB-1242)			ND (4.33)	ND (5.12)	ND (4.45)	ND (4.62)	ND (4.42)	ND (5.22)	ND (4.65)	ND (4.45)
Aroclor-1248 (PCB-1248)			ND (2.99)	ND (3.53)	ND (3.07)	ND (3.18)	ND (3.05)	ND (3.60)	ND (3.20)	ND (3.07)
Aroclor-1254 (PCB-1254)			ND (2.91)	10.6 J	6.62 J	5.64 J	ND (2.97)	233	ND (3.12)	7.21 J
Aroclor-1260 (PCB-1260)			ND (2.70)	5.56 J	3.36 J	4.91 J	ND (2.75)	ND (3.25)	4.67 J	ND (2.77)
Aroclor-1262 (PCB-1262)			ND (1.76)	ND (2.08)	ND (1.80)	ND (1.87)	ND (1.79)	ND (2.12)	ND (1.88)	ND (1.80)
Aroclor-1268 (PCB-1268)			ND (5.13)	ND (6.07)	ND (5.27)	ND (5.47)	ND (5.24)	ND (6.19)	ND (5.50)	ND (5.27)
Polychlorinated biphenyls (PCBs)	1000		ND (1.76)	16.2 J	9.98 J	10.6 J	ND (1.79)	233	4.67 J	7.21 J
Semi-Volatile Organic Compounds (ug/kg)										
1,2,4,5-Tetrachlorobenzene			ND (19)	ND (22)	ND (19)	ND (19)	ND (19)	ND (22)	ND (20)	ND (19)
2,2'-oxybis(1-Chloropropane)			ND (31)	ND (37)	ND (31)	ND (32)	ND (32)	ND (36)	ND (33)	ND (32)
2,3,4,6-Tetrachlorophenol			ND (37)	ND (43)	ND (37)	ND (37)	ND (38)	ND (43)	ND (39)	ND (38)
2,4,5-Trichlorophenol			ND (35)	ND (41)	ND (35)	ND (36)	ND (36)	ND (40)	ND (37)	ND (36)
2,4,6-Trichlorophenol			ND (34)	ND (41)	ND (35)	ND (35)	ND (35)	ND (40)	ND (37)	ND (35)
2,4-Dichlorophenol			ND (29)	ND (34)	ND (29)	ND (30)	ND (30)	ND (34)	ND (31)	ND (30)
2,4-Dimethylphenol			ND (60)	ND (71)	ND (60)	ND (61)	ND (62)	ND (70)	ND (64)	ND (61)
2,4-Dinitrophenol			ND (84)	ND (100)	ND (85)	ND (86)	ND (87)	ND (98)	ND (90)	ND (87)
2,4-Dinitrotoluene			ND (36)	ND (43)	ND (37)	ND (37)	ND (37)	ND (42)	ND (39)	ND (37)
2,6-Dinitrotoluene			ND (31)	ND (37)	ND (31)	ND (32)	ND (32)	ND (36)	ND (33)	ND (32)
2-Chloronaphthalene			ND (18)	ND (21)	ND (18)	ND (18)	ND (18)	ND (21)	ND (19)	ND (18)
2-Chlorophenol			ND (21)	ND (25)	ND (22)	ND (22)	ND (22)	ND (25)	ND (23)	ND (22)
2-Methylnaphthalene			ND (22)	ND (26)	ND (22)	ND (22)	ND (22)	ND (26)	ND (23)	ND (22)
2-Methylphenol (o-Cresol)	500000		ND (28)	ND (33)	ND (28)	ND (29)	ND (29)	ND (33)	ND (30)	ND (29)
2-Nitroaniline			ND (35)	ND (41)	ND (35)	ND (36)	ND (36)	ND (41)	ND (37)	ND (36)
2-Nitrophenol			ND (68)	ND (81)	ND (69)	ND (70)	ND (70)	ND (79)	ND (73)	ND (70)
3,3'-Dichlorobenzidine			ND (48)	ND (57)	ND (49)	ND (49)	ND (50)	ND (56)	ND (51)	ND (49)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1718140-03 4542-170601-1015	L1717921-01 4542-170531-0840	L1717921-02 4542-170531-0850	L1717921-04 4542-170531-1010	L1717921-06 4542-170531-1305	L1717921-03 4542-170531-1000	L1717921-05 4542-170531-1115	L1717921-07 4542-170531-1320
		Location Sample Depth (ft.) Sample Date Sample Type	Area 2B Sidewall 4.5-5.0 06/01/2017 Normal	Area 2C East End Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C North Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C North Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C North Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C South Sidewall 3.0-3.5 05/31/2017 Normal	Area 2C South Sidewall 3.0-3.5 05/31/2017 Normal	Area 2C South Sidewall 1.0-1.5 05/31/2017 Normal
3-Methylphenol	500000		ND (28)	ND (34)	ND (29)	ND (29)	ND (29)	ND (33)	ND (30)	ND (29)
3-Nitroaniline			ND (34)	ND (40)	ND (34)	ND (35)	ND (35)	ND (40)	ND (36)	ND (35)
4,6-Dinitro-2-methylphenol			ND (87)	ND (100)	ND (88)	ND (89)	ND (90)	ND (100)	ND (93)	ND (89)
4-Bromophenyl phenyl ether			ND (28)	ND (33)	ND (28)	ND (28)	ND (28)	ND (32)	ND (30)	ND (28)
4-Chloro-3-methylphenol			ND (27)	ND (32)	ND (27)	ND (28)	ND (28)	ND (31)	ND (29)	ND (28)
4-Chloroaniline			ND (33)	ND (39)	ND (33)	ND (34)	ND (34)	ND (38)	ND (35)	ND (34)
4-Chlorophenyl phenyl ether			ND (19)	ND (23)	ND (20)	ND (20)	ND (20)	ND (22)	ND (21)	ND (20)
4-Nitroaniline			ND (75)	ND (89)	ND (76)	ND (77)	ND (77)	ND (87)	ND (80)	ND (77)
4-Nitrophenol			ND (74)	ND (88)	ND (75)	ND (76)	ND (76)	ND (86)	ND (79)	ND (76)
Acenaphthene	500000		ND (19)	ND (22)	ND (19)	ND (19)	ND (19)	ND (22)	ND (20)	ND (19)
Acenaphthylene	500000		ND (28)	ND (33)	ND (28)	ND (29)	ND (29)	ND (33)	ND (30)	ND (29)
Acetophenone			ND (22)	ND (26)	ND (23)	ND (23)	ND (23)	ND (26)	ND (24)	ND (23)
Anthracene	500000		ND (35)	ND (42)	ND (36)	ND (36)	ND (36)	ND (41)	ND (38)	ND (36)
Atrazine			ND (64)	ND (75)	ND (64)	ND (65)	ND (65)	ND (74)	ND (68)	ND (65)
Benzaldehyde			ND (49)	ND (58)	ND (49)	ND (50)	ND (50)	ND (57)	ND (52)	ND (50)
Benzo(a)anthracene	5600		ND (20)	ND (24)	58 J	ND (21)	ND (21)	ND (24)	ND (22)	ND (21)
Benzo(a)pyrene	1000		ND (44)	ND (52)	54 J	ND (45)	ND (46)	ND (52)	ND (47)	ND (45)
Benzo(b)fluoranthene	5600		ND (30)	ND (36)	73 J	ND (31)	ND (31)	ND (36)	ND (32)	ND (31)
Benzo(g,h,i)perylene	500000		ND (21)	ND (25)	37 J	ND (22)	ND (22)	ND (25)	ND (23)	ND (22)
Benzo(k)fluoranthene	56000		ND (29)	ND (34)	ND (29)	ND (30)	ND (30)	ND (34)	ND (31)	ND (30)
Biphenyl			ND (42)	ND (50)	ND (42)	ND (43)	ND (43)	ND (49)	ND (45)	ND (43)
bis(2-Chloroethoxy)methane			ND (18)	ND (21)	ND (18)	ND (18)	ND (19)	ND (21)	ND (19)	ND (19)
bis(2-Chloroethyl)ether			ND (25)	ND (29)	ND (25)	ND (25)	ND (25)	ND (29)	ND (26)	ND (25)
bis(2-Ethylhexyl)phthalate			79 J	ND (74)	ND (63)	ND (64)	ND (64)	ND (73)	ND (67)	ND (64)
Butyl benzylphthalate			ND (46)	ND (54)	ND (46)	ND (47)	ND (47)	ND (53)	ND (49)	ND (47)
Caprolactam			ND (55)	ND (65)	ND (56)	ND (56)	ND (57)	ND (64)	ND (59)	ND (56)
Carbazole			ND (18)	ND (21) J	ND (18) J	ND (18) J	ND (18) J	ND (20) J	ND (19) J	ND (18) J
Chrysene	56000		ND (19)	ND (22)	57 J	ND (19)	ND (19)	ND (22)	ND (20)	ND (19)
Dibenz(a,h)anthracene	560		ND (21)	ND (25)	ND (21)	ND (21)	ND (22)	ND (24)	ND (22)	ND (21)
Dibenzofuran	350000		ND (17)	ND (20)	ND (17)	ND (18)	ND (18)	ND (20)	ND (18)	ND (18)
Diethyl phthalate			ND (17)	ND (20)	ND (17)	ND (17)	ND (17)	ND (20)	ND (18)	ND (17)
Dimethyl phthalate			ND (38)	ND (45)	ND (38)	ND (39)	ND (39)	ND (44)	ND (40)	ND (39)
Di-n-butylphthalate			ND (34)	ND (41)	ND (35)	ND (35)	ND (35)	ND (40)	ND (37)	ND (35)
Di-n-octyl phthalate			ND (62)	ND (73)	ND (62)	ND (63)	ND (63)	ND (72)	ND (66)	ND (63)
Fluoranthene	500000		ND (21)	ND (25)	160	33 J	ND (21)	35 J	ND (22)	ND (21)
Fluorene	500000		ND (18)	ND (21)	ND (18)	ND (18)	ND (18)	ND (20)	ND (19)	ND (18)
Hexachlorobenzene	6000		ND (20)	ND (24) J	ND (20) J	ND (21) J	ND (21) J	ND (24) J	ND (22) J	ND (21) J
Hexachlorobutadiene			ND (26)	ND (31)	ND (27)	ND (27)	ND (27)	ND (31)	ND (28)	ND (27)
Hexachlorocyclopentadiene			160 R	ND (190)	ND (160)	ND (170)	ND (170)	ND (190)	ND (180)	ND (170)
Hexachloroethane			ND (29)	ND (35)	ND (30)	ND (30)	ND (30)	ND (34)	ND (31)	ND (30)
Indeno(1,2,3-cd)pyrene	5600		ND (25)	ND (30)	41 J	ND (26)	ND (26)	ND (29)	ND (27)	ND (26)
Isophorone			ND (24)	ND (28)	ND (24)	ND (24)	ND (24)	ND (27)	ND (25)	ND (24)
Naphthalene	500000		ND (22)	ND (26)	ND (22)	ND (22)	ND (23)	ND (26)	ND (24)	ND (23)
Nitrobenzene	69000		ND (27)	ND (32)	ND (27)	ND (27)	ND (28)	ND (31)	ND (29)	ND (28)
N-Nitrosodi-n-propylamine			ND (28)	ND (33)	ND (28)	ND (29)	ND (29)	ND (33)	ND (30)	ND (29)
N-Nitrosodiphenylamine			ND (21)	ND (24)	ND (21)	ND (21)	ND (21)	ND (24)	ND (22)	ND (21)
Pentachlorophenol	6700		ND (40)	ND (47)	ND (40)	ND (41)	ND (41)	ND (46)	ND (42)	ND (41)
Phenanthrene	500000		ND (22)	ND (26)	98 J	ND (22)	ND (23)	ND (26)	ND (24)	ND (23)
Phenol	500000		ND (27)	ND (32)	ND (28)	ND (28)	ND (28)	ND (32)	ND (29)	ND (28)
Pyrene	500000		ND (18)	ND (21)	120	27 J	ND (18)	30 J	ND (19)	ND (18)
Volatile Organic Compounds (ug/kg)										
1,1,1-Trichloroethane	500000		ND (0.25)	ND (0.33)	ND (0.31)	ND (0.25)	ND (0.28)	ND (0.30)	ND (0.40) J	ND (0.30)
1,1,2,2-Tetrachloroethane			ND (0.22)	ND (0.28)	ND (0.26)	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.34)	ND (0.25)
1,1,2-Trichloroethane			ND (0.23)	ND (0.30)	ND (0.28)	ND (0.23)	ND (0.25)	ND (0.27)	ND (0.36)	ND (0.26)

TABLE III
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Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1718140-03 4542-170601-1015	L1717921-01 4542-170531-0840	L1717921-02 4542-170531-0850	L1717921-04 4542-170531-1010	L1717921-06 4542-170531-1305	L1717921-03 4542-170531-1000	L1717921-05 4542-170531-1115	L1717921-07 4542-170531-1320
		Location Sample Depth (ft.) Sample Date Sample Type	Area 2B Sidewall 4.5-5.0 06/01/2017 Normal	Area 2C East End Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C North Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C North Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C North Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C South Sidewall 3.0-3.5 05/31/2017 Normal	Area 2C South Sidewall 3.0-3.5 05/31/2017 Normal	Area 2C South Sidewall 1.0-1.5 05/31/2017 Normal
1,1-Dichloroethane	240000		ND (0.20)	ND (0.26)	ND (0.24)	ND (0.20)	ND (0.22)	ND (0.23)	ND (0.31) J	ND (0.23)
1,1-Dichloroethene	500000		ND (0.27)	ND (0.35)	ND (0.33)	ND (0.27)	ND (0.30)	ND (0.32)	ND (0.43) J	ND (0.31)
1,2,3-Trichlorobenzene			ND (0.18)	ND (0.24)	ND (0.22)	ND (0.18)	ND (0.20)	ND (0.22)	ND (0.29) J	ND (0.21)
1,2,4-Trichlorobenzene			ND (0.16)	ND (0.20)	ND (0.19)	ND (0.16)	ND (0.17)	ND (0.19)	ND (0.25) J	ND (0.18)
1,2,4-Trimethylbenzene	190000		ND (0.13)	ND (0.18)	ND (0.16)	ND (0.14)	ND (0.15)	ND (0.16)	ND (0.21) J	ND (0.16)
1,2-Dibromo-3-chloropropane (DBCP)			ND (0.29)	ND (0.38)	ND (0.35)	ND (0.29)	ND (0.32)	ND (0.34)	ND (0.46)	ND (0.33)
1,2-Dibromoethane (Ethylene Dibromide)			ND (0.14)	ND (0.19)	ND (0.18)	ND (0.14)	ND (0.16)	ND (0.17)	ND (0.23)	ND (0.17)
1,2-Dichlorobenzene	500000		0.37 J	ND (0.17)	ND (0.16)	ND (0.13)	ND (0.15)	ND (0.16)	ND (0.21) J	ND (0.15)
1,2-Dichloroethane	30000		ND (0.18)	ND (0.23)	ND (0.22)	ND (0.18)	ND (0.20)	ND (0.21)	ND (0.28) J	ND (0.21)
1,2-Dichloroethene (total)			-	-	-	-	-	-	-	-
1,2-Dichloropropane			ND (0.16)	ND (0.22)	ND (0.20)	ND (0.16)	ND (0.18)	ND (0.20)	ND (0.26) J	ND (0.19)
1,3,5-Trimethylbenzene	190000		ND (0.12)	ND (0.15)	ND (0.14)	ND (0.12)	ND (0.13)	ND (0.14)	ND (0.18) J	ND (0.14)
1,3-Dichlorobenzene	280000		ND (0.16)	ND (0.21)	ND (0.19)	ND (0.16)	ND (0.18)	ND (0.19)	ND (0.25) J	ND (0.18)
1,4-Dichlorobenzene	130000		ND (0.13)	ND (0.17)	ND (0.16)	ND (0.13)	ND (0.15)	ND (0.16)	ND (0.21) J	ND (0.15)
1,4-Dioxane	130000		ND (10)	ND (14)	ND (13)	ND (10)	ND (12)	ND (12)	ND (16)	ND (12)
2-Butanone (Methyl Ethyl Ketone)	500000		ND (0.50)	ND (0.65)	ND (0.61)	ND (0.50)	ND (0.56)	ND (0.60)	ND (0.79)	ND (0.58)
2-Hexanone			ND (0.48)	ND (0.63)	ND (0.58)	ND (0.48)	ND (0.54)	ND (0.58)	ND (0.76) J	ND (0.56)
2-Phenylbutane (sec-Butylbenzene)	500000		ND (0.16)	ND (0.20)	ND (0.19)	ND (0.16)	ND (0.17)	ND (0.19)	ND (0.25) J	ND (0.18)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)			ND (0.18)	ND (0.23)	ND (0.21)	ND (0.18)	ND (0.20)	ND (0.21)	ND (0.28)	ND (0.21)
Acetone	500000		ND (1.6)	ND (2.2)	ND (2.0)	ND (1.7)	ND (1.8)	4.1 J	ND (2.6)	ND (1.9)
Benzene	44000		ND (0.14)	ND (0.18)	ND (0.17)	ND (0.14)	ND (0.16)	ND (0.17)	ND (0.22) J	ND (0.16)
Bromodichloromethane			ND (0.22)	ND (0.29)	ND (0.27)	ND (0.22)	ND (0.25)	ND (0.27)	ND (0.35) J	ND (0.26)
Bromoform			ND (0.17)	ND (0.22)	ND (0.21)	ND (0.17)	ND (0.19)	ND (0.20)	ND (0.27)	ND (0.20)
Bromomethane (Methyl Bromide)			ND (0.24)	ND (0.32)	ND (0.30)	ND (0.24)	ND (0.27)	ND (0.29)	ND (0.39) J	ND (0.28)
Carbon disulfide			ND (0.80)	ND (1.0) J	ND (0.97) J	ND (0.80) J	ND (0.89) J	ND (0.95) J	ND (1.3) J	ND (0.93) J
Carbon tetrachloride	22000		ND (0.25)	ND (0.33)	ND (0.30)	ND (0.25)	ND (0.28)	ND (0.30)	ND (0.40) J	ND (0.29)
Chlorobenzene	500000		ND (0.25)	ND (0.33)	ND (0.31)	ND (0.25)	ND (0.28)	ND (0.30)	ND (0.40) J	ND (0.29)
Chlorobromomethane			ND (0.26)	ND (0.34)	ND (0.31)	ND (0.26)	ND (0.29)	ND (0.31)	ND (0.41) J	ND (0.30)
Chloroethane			ND (0.23)	ND (0.30) J	ND (0.28) J	ND (0.23) J	ND (0.25) J	ND (0.27)	ND (0.36) J	ND (0.27) J
Chloroform (Trichloromethane)	350000		ND (0.27)	ND (0.35)	ND (0.32)	ND (0.27)	ND (0.30)	ND (0.32)	ND (0.42) J	ND (0.31)
Chloromethane (Methyl Chloride)			ND (0.32)	ND (0.41) J	ND (0.38) J	ND (0.32) J	ND (0.35) J	ND (0.38)	ND (0.50) J	ND (0.37) J
cis-1,2-Dichloroethene	500000		11	ND (0.32)	ND (0.30)	ND (0.25)	ND (0.28)	0.72 J	ND (0.39) J	ND (0.29)
cis-1,3-Dichloropropene			ND (0.17)	ND (0.22)	ND (0.20)	ND (0.17)	ND (0.19)	ND (0.20)	ND (0.26) J	ND (0.20)
Cyclohexane			ND (0.31)	ND (0.41)	ND (0.38)	ND (0.31)	ND (0.35)	ND (0.37)	ND (0.50) J	ND (0.36)
Cymene (p-Isopropyltoluene)			ND (0.15)	ND (0.19)	ND (0.18)	ND (0.15)	ND (0.16)	ND (0.17)	ND (0.23) J	ND (0.17)
Dibromochloromethane			ND (0.13)	ND (0.17)	ND (0.15)	ND (0.13)	ND (0.14)	ND (0.15)	ND (0.20) J	ND (0.15)
Dichlorodifluoromethane (CFC-12)			ND (0.36)	ND (0.47) J	ND (0.44) J	ND (0.36) J	ND (0.40) J	ND (0.43) J	ND (0.57) J	ND (0.42) J
Ethylbenzene	390000		ND (0.12)	ND (0.16)	ND (0.15)	ND (0.12)	ND (0.14)	ND (0.15)	ND (0.20) J	ND (0.14)
Isopropylbenzene (Cumene)			ND (0.14)	ND (0.18)	ND (0.17)	ND (0.14)	ND (0.16)	ND (0.17)	ND (0.22) J	ND (0.16)
m,p-Xylenes			ND (0.25)	ND (0.33)	ND (0.31)	ND (0.25)	ND (0.28)	ND (0.30)	ND (0.40) J	ND (0.30)
Methyl acetate			ND (0.34)	ND (0.44)	ND (0.41)	ND (0.34)	ND (0.37)	ND (0.40)	ND (0.53)	ND (0.39)
Methyl cyclohexane			ND (0.17)	ND (0.23)	ND (0.21)	ND (0.17)	ND (0.19)	ND (0.21)	ND (0.28) J	ND (0.20)
Methyl Tert Butyl Ether	500000		ND (0.11)	ND (0.14)	ND (0.13)	ND (0.11)	ND (0.12)	ND (0.13)	ND (0.18) J	ND (0.13)
Methylene chloride	500000		ND (1.2)	ND (1.6)	ND (1.4)	ND (1.2)	ND (1.3)	ND (1.4)	ND (1.9) J	ND (1.4)

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	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1718140-03	L1717921-01	L1717921-02	L1717921-04	L1717921-06	L1717921-03	L1717921-05	L1717921-07
		Sample ID	4542-170601-1015	4542-170531-0840	4542-170531-0850	4542-170531-1010	4542-170531-1305	4542-170531-1000	4542-170531-1115	4542-170531-1320
		Location	Area 2B Sidewall	Area 2C East End Sidewall	Area 2C North Sidewall	Area 2C North Sidewall	Area 2C North Sidewall	Area 2C South Sidewall	Area 2C South Sidewall	Area 2C South Sidewall
		Sample Depth (ft.)	4.5-5.0	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	3.0-3.5	3.0-3.5	1.0-1.5
		Sample Date	06/01/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017	05/31/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Naphthalene	500000		ND (0.10)	ND (0.13)	ND (0.12)	ND (0.10)	0.16 J	ND (0.12)	ND (0.16) J	ND (0.12)
n-Butylbenzene	500000		ND (0.16)	ND (0.22)	ND (0.20)	ND (0.16)	ND (0.18)	ND (0.20)	ND (0.26) J	ND (0.19)
n-Propylbenzene	500000		ND (0.16)	ND (0.20)	ND (0.19)	ND (0.16)	ND (0.17)	ND (0.19)	ND (0.25) J	ND (0.18)
o-Xylene			ND (0.24)	ND (0.32)	ND (0.30)	ND (0.24)	ND (0.27)	ND (0.29)	ND (0.39) J	ND (0.28)
Styrene			ND (0.29)	ND (0.38)	ND (0.35)	ND (0.29)	ND (0.32)	ND (0.35)	ND (0.46) J	ND (0.34)
Tetrachloroethene	150000		0.41 J	ND (0.29)	ND (0.26)	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.35) J	ND (0.26)
Toluene	500000		ND (0.14)	ND (0.18)	ND (0.17)	ND (0.14)	ND (0.16)	ND (0.17)	ND (0.22) J	ND (0.16)
trans-1,2-Dichloroethene	500000		ND (0.17)	ND (0.23)	ND (0.21)	ND (0.17)	ND (0.19)	ND (0.21)	ND (0.28) J	ND (0.20)
trans-1,3-Dichloropropene			ND (0.15)	ND (0.20)	ND (0.18)	ND (0.15)	ND (0.17)	ND (0.18)	ND (0.24) J	ND (0.18)
Trichloroethene	200000		25 J+	0.39 J	1.6	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.35) J	ND (0.26)
Trichlorofluoromethane (CFC-11)			ND (0.30)	ND (0.40)	ND (0.37)	ND (0.30)	ND (0.34)	ND (0.36)	ND (0.48) J	ND (0.35)
Trifluorotrichloroethane (Freon 113)			ND (0.37)	ND (0.49)	ND (0.45)	ND (0.37)	ND (0.41)	ND (0.44)	ND (0.59) J	ND (0.43)
Vinyl chloride	13000		0.91 J	ND (0.30) J	ND (0.28) J	ND (0.23) J	ND (0.25) J	0.92 J	ND (0.36) J	ND (0.27) J
Xylene (total)	500000		ND (0.24)	ND (0.32)	ND (0.30)	ND (0.24)	ND (0.27)	ND (0.29)	ND (0.39) J	ND (0.28)

Notes and Abbreviations:

1. Results were compared to the Restricted Use Soil Cleanup Objective (SCO)
for Commercial (NYSDEC, Table 375-6.8(b), December 2006).

2. Results in dark gray shading exceed applicable criteria.

3. ND (#): Result is not detected above the indicated reporting limit.

J: Estimated result

J+: Estimated result, biased high

R: Rejected

4. Results in **bold** are detected.

* - Bottom confirmation samples were collected before excavation activities using a
geoprobe.

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

		Laboratory ID Sample ID	L1717921-08 4542-170531-1335	L1717921-13 1234-170531-0001	L1707923-07 4542-170314-1255	L1707923-08 4542-170314-1305	L1707923-04 4542-170314-1005	L1707923-05 4542-170314-1015	L1707923-01 4542-170314-0850	L1707923-02 4542-170314-0900
	NYSDEC Part 375 SCO (Commercial)	Location Sample Depth (ft.) Sample Date Sample Type	Area 2C South Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C South Sidewall 1.0-1.5 05/31/2017 Duplicate	A2D-01 - Area 2A Bottom 1.0-1.5 03/14/2017 Normal	A2D-01 - Area 2A Sidewall 3.0-3.5 03/14/2017 Normal	A2D-02 - Area 2A Bottom 1.0-1.5 03/14/2017 Normal	A2D-02 - Area 2A Bottom 3.0-3.5 03/14/2017 Normal	A2D-03 - Area 2A - Bottom 1.0-1.5 03/14/2017 Normal	A2D-03 - Area 2A - Bottom 3.0-3.5 03/14/2017 Normal
Inorganic Compounds (mg/kg)										
Aluminum			4,250 J	3,640 J	4,300	4,400	4,000	3,200	4,000	3,900
Antimony			ND (0.349)	ND (0.346)	ND (0.35)	ND (0.33)	ND (0.34)	ND (0.34)	ND (0.35)	ND (0.34)
Arsenic	16		3.18 J	4.17 J	4.1	1.4	2.4	1.4	2.9	2
Barium	400		35.1	27.8	32	32	36	29	38	34
Beryllium	590		0.092 J	0.064 J	0.09 J	0.04 J	0.08 J	0.05 J	0.07 J	0.06 J
Cadmium	9.3		ND (0.090)	ND (0.089)	0.19 J	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)
Calcium			43,600 J	42,600 J	38,000	36,000	46,000	47,000	47,000	43,000
Chromium			6.91	6.33	30	8.1	6.9	5.7	9.5	7.6
Cobalt			3.4	3.18	4	4.5	3.5	3.2	3.8	4
Copper	270		11.5	10.6	15	11	13	8.5	10	10
Iron			10,400 J	10,200 J	9,800	9,800	10,000	8,200	9,800	9,600
Lead	1000		7.17	6.25	11	5	6.8	4.5	7.2	6.9
Magnesium			15,100 J	15,100 J	14,000	13,000	14,000	18,000	16,000	15,000
Manganese	10000		261 J	227 J	230	270	260	250	260	300
Mercury	2.8		ND (0.02)	ND (0.02)	0.03 J	0.02 J	0.02 J	0.02 J	0.02 J	0.02 J
Nickel	310		7.78	7.28	8.6	9.7	7.7	6.8	7.9	8.2
Potassium			664	570	420	470	480	530	510	560
Selenium	1500		0.441 J	ND (0.235)	ND (0.24)	ND (0.23)	ND (0.23)	0.31 J	ND (0.24)	ND (0.23)
Silver	1500		ND (0.260)	ND (0.258)	ND (0.26)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.26)	ND (0.25)
Sodium			480	391	120 J	160 J	120 J	100 J	130 J	120 J
Thallium			ND (0.289) J	ND (0.287) J	ND (0.29)	ND (0.28)	ND (0.28)	0.36 J	ND (0.29)	ND (0.28)
Vanadium			11.7	10.8	14	11	12	9.1	11	11
Zinc	10000		51	57	46	42	42	31	43	45
PCBs (ug/kg)										
Aroclor-1016 (PCB-1016)			ND (2.96) J	ND (2.99) J	ND (3.06)	ND (2.88)	ND (2.90)	ND (2.86)	ND (3.01)	ND (2.91)
Aroclor-1221 (PCB-1221)			ND (3.46)	ND (3.49)	ND (3.58)	ND (3.37)	ND (3.39)	ND (3.34)	ND (3.51)	ND (3.40)
Aroclor-1232 (PCB-1232)			ND (4.40)	ND (4.44)	ND (4.54)	ND (4.28)	ND (4.30)	ND (4.24)	ND (4.46)	ND (4.32)
Aroclor-1242 (PCB-1242)			ND (4.59)	ND (4.63)	ND (4.75)	ND (4.47)	ND (4.50)	ND (4.43)	ND (4.66)	ND (4.51)
Aroclor-1248 (PCB-1248)			ND (3.16)	ND (3.20)	ND (3.27)	ND (3.08)	ND (3.10)	ND (3.05)	ND (3.21)	ND (3.11)
Aroclor-1254 (PCB-1254)			ND (3.08)	ND (3.11)	17.2 J	ND (3.00)	ND (3.02)	ND (2.97)	9.97 J	ND (3.03)
Aroclor-1260 (PCB-1260)			ND (2.86)	ND (2.88)	7.79 J	ND (2.78)	ND (2.80)	ND (2.76)	ND (2.90)	ND (2.81)
Aroclor-1262 (PCB-1262)			ND (1.86)	ND (1.88)	ND (1.92)	ND (1.81)	ND (1.82)	ND (1.79)	ND (1.89)	ND (1.83)
Aroclor-1268 (PCB-1268)			ND (5.44)	ND (5.49)	ND (5.62)	ND (5.30)	ND (5.33)	ND (5.25)	ND (5.52)	ND (5.34)
Polychlorinated biphenyls (PCBs)	1000		ND (1.86)	ND (1.88)	25.0 J	ND (1.81)	ND (1.82)	ND (1.79)	9.97 J	ND (1.83)
Semi-Volatile Organic Compounds (ug/kg)										
1,2,4,5-Tetrachlorobenzene			ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)
2,2'-oxybis(1-Chloropropane)			ND (33)	ND (32)	ND (33)	ND (32)	ND (33)	ND (32)	ND (32)	ND (32)
2,3,4,6-Tetrachlorophenol			ND (39)	ND (38)	ND (39)	ND (38)	ND (39)	ND (38)	ND (38)	ND (37)
2,4,5-Trichlorophenol			ND (37)	ND (36)	ND (37)	ND (36)	ND (37)	ND (36)	ND (36)	ND (36)
2,4,6-Trichlorophenol			ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (35)
2,4-Dichlorophenol			ND (31)	ND (30)	ND (31)	ND (30)	ND (31)	ND (30)	ND (30)	ND (30)
2,4-Dimethylphenol			ND (63)	ND (62)	ND (64)	ND (62)	ND (63)	ND (62)	ND (62)	ND (61)
2,4-Dinitrophenol			ND (89)	ND (88)	ND (90)	ND (88)	ND (89)	ND (87)	ND (88)	ND (86)
2,4-Dinitrotoluene			ND (38)	ND (38)	ND (38)	ND (38)	ND (38)	ND (37)	ND (38)	ND (37)
2,6-Dinitrotoluene			ND (33)	ND (32)	ND (33)	ND (32)	ND (33)	ND (32)	ND (32)	ND (32)
2-Chloronaphthalene			ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (18)	ND (19)	ND (18)
2-Chlorophenol			ND (23)	ND (22)	ND (23)	ND (22)	ND (23)	ND (22)	ND (22)	ND (22)
2-Methylnaphthalene			ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (22)
2-Methylphenol (o-Cresol)	500000		ND (30)	ND (29)	ND (30)	ND (29)	ND (30)	ND (29)	ND (29)	ND (29)
2-Nitroaniline			ND (37)	ND (36)	ND (37)	ND (36)	ND (37)	ND (36)	ND (36)	ND (36)
2-Nitrophenol			ND (72)	ND (71)	ND (72)	ND (71)	ND (72)	ND (70)	ND (71)	ND (70)
3,3'-Dichlorobenzidine			ND (51)	ND (50)	ND (51)	ND (50)	ND (51)	ND (50)	ND (50)	ND (49)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1717921-08 4542-170531-1335	L1717921-13 1234-170531-0001	L1707923-07 4542-170314-1255	L1707923-08 4542-170314-1305	L1707923-04 4542-170314-1005	L1707923-05 4542-170314-1015	L1707923-01 4542-170314-0850	L1707923-02 4542-170314-0900
		Location Sample Depth (ft.) Sample Date Sample Type	Area 2C South Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C South Sidewall 1.0-1.5 05/31/2017 Duplicate	A2D-01 - Area 2A Bottom 1.0-1.5 03/14/2017 Normal	A2D-01 - Area 2A Sidewall 3.0-3.5 03/14/2017 Normal	A2D-02 - Area 2A Bottom 1.0-1.5 03/14/2017 Normal	A2D-02 - Area 2A Bottom 3.0-3.5 03/14/2017 Normal	A2D-03 - Area 2A - Bottom 1.0-1.5 03/14/2017 Normal	A2D-03 - Area 2A - Bottom 3.0-3.5 03/14/2017 Normal
3-Methylphenol	500000		ND (30)	ND (30)	ND (30)	ND (30)	ND (30)	ND (29)	ND (30)	ND (29)
3-Nitroaniline			ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (35)	ND (36)	ND (35)
4,6-Dinitro-2-methylphenol			ND (92)	ND (91)	ND (92)	ND (91)	ND (92)	ND (90)	ND (91)	ND (89)
4-Bromophenyl phenyl ether			ND (29)	ND (29)	ND (29)	ND (29)	ND (29)	ND (28)	ND (29)	ND (28)
4-Chloro-3-methylphenol			ND (28)	ND (28)	ND (29)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)
4-Chloroaniline			ND (35)	ND (34)	ND (35)	ND (34)	ND (35)	ND (34)	ND (34)	ND (34)
4-Chlorophenyl phenyl ether			ND (20)	ND (20)	ND (21)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
4-Nitroaniline			ND (79)	ND (78)	ND (80)	ND (78)	ND (79)	ND (78)	ND (78)	ND (77)
4-Nitrophenol			ND (78)	ND (77)	ND (79)	ND (77)	ND (78)	ND (76)	ND (77)	ND (76)
Acenaphthene	500000		ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)	ND (20)	ND (19)
Acenaphthylene	500000		ND (30)	ND (29)	ND (30)	ND (29)	ND (30)	ND (29)	ND (29)	ND (29)
Acetophenone			ND (24)	ND (23)	ND (24)	ND (23)	ND (24)	ND (23)	ND (23)	ND (23)
Anthracene	500000		ND (37)	ND (37)	ND (38)	ND (37)	ND (37)	ND (36)	ND (37)	ND (36)
Atrazine			ND (67)	ND (66)	ND (68)	ND (66)	ND (67)	ND (66)	ND (66)	ND (65)
Benzaldehyde			ND (52)	ND (51)	ND (52)	ND (51)	ND (52)	ND (50)	ND (51)	ND (50)
Benzo(a)anthracene	5600		ND (22)	ND (21)	ND (22)	ND (21)	ND (22)	ND (21)	ND (21)	ND (21)
Benzo(a)pyrene	1000		ND (47)	ND (46)	ND (47)	ND (46)	ND (47)	ND (46)	ND (46)	ND (45)
Benzo(b)fluoranthene	5600		ND (32)	ND (32)	ND (32)	ND (32)	ND (32)	ND (32)	ND (32)	ND (31)
Benzo(g,h,i)perylene	500000		ND (22)	ND (22)	ND (23)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)
Benzo(k)fluoranthene	56000		ND (31)	ND (30)	ND (31)	ND (30)	ND (31)	ND (30)	ND (30)	ND (30)
Biphenyl			ND (44)	ND (44)	ND (45)	ND (44)	ND (44)	ND (43)	ND (44)	ND (43)
bis(2-Chloroethoxy)methane			ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (18)
bis(2-Chloroethyl)ether			ND (26)	ND (26)	ND (26)	ND (26)	ND (26)	ND (25)	ND (26)	ND (25)
bis(2-Ethylhexyl)phthalate			ND (66)	ND (65)	ND (67)	ND (65)	ND (66)	ND (65)	75 J	ND (64)
Butyl benzylphthalate			ND (48)	ND (48)	ND (49)	ND (48)	ND (48)	ND (47)	ND (48)	ND (47)
Caprolactam			ND (58)	ND (57)	ND (59)	ND (57)	ND (58)	ND (57)	ND (58)	ND (56)
Carbazole			ND (19) J	ND (18) J	ND (19)	ND (18)	ND (19)	ND (18)	ND (18)	ND (18)
Chrysene	56000		ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)	ND (20)	ND (19)
Dibenz(a,h)anthracene	560		ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (21)
Dibenzofuran	350000		ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)	ND (18)
Diethyl phthalate			ND (18)	ND (17)	ND (18)	ND (18)	ND (18)	ND (17)	ND (18)	ND (17)
Dimethyl phthalate			ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	ND (39)	ND (40)	ND (39)
Di-n-butylphthalate			ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (36)	ND (35)
Di-n-octyl phthalate			ND (65)	ND (64)	ND (66)	ND (64)	ND (65)	ND (64)	ND (64)	ND (63)
Fluoranthene	500000		ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (22)	ND (21)
Fluorene	500000		ND (19)	ND (18)	ND (19)	ND (18)	ND (19)	ND (18)	ND (18)	ND (18)
Hexachlorobenzene	6000		ND (21) J	ND (21) J	ND (22)	ND (21)	ND (21)	ND (21)	ND (21)	ND (21)
Hexachlorobutadiene			ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (27)	ND (28)	ND (27)
Hexachlorocyclopentadiene			ND (170)	ND (170)	ND (170)	ND (170)	ND (170)	ND (170)	ND (170)	ND (170)
Hexachloroethane			ND (31)	ND (30)	ND (31)	ND (30)	ND (31)	ND (30)	ND (31)	ND (30)
Indeno(1,2,3-cd)pyrene	5600		ND (27)	ND (26)	ND (27)	ND (26)	ND (27)	ND (26)	ND (26)	ND (26)
Isophorone			ND (25)	ND (24)	ND (25)	ND (24)	ND (25)	ND (24)	ND (24)	ND (24)
Naphthalene	500000		ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)
Nitrobenzene	69000		ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (28)	ND (27)
N-Nitrosodi-n-propylamine			ND (30)	ND (29)	ND (30)	ND (29)	ND (30)	ND (29)	ND (29)	ND (29)
N-Nitrosodiphenylamine			ND (22)	ND (21)	ND (22)	ND (22)	ND (22)	ND (21)	ND (22)	ND (21)
Pentachlorophenol	6700		ND (42)	ND (42)	ND (42)	ND (42)	ND (42)	ND (41)	ND (42)	ND (41)
Phenanthrene	500000		ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (23)	ND (22)
Phenol	500000		ND (29)	ND (28)	ND (29)	ND (28)	ND (29)	ND (28)	ND (28)	ND (28)
Pyrene	500000		ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (18)
Volatile Organic Compounds (ug/kg)										
1,1,1-Trichloroethane	500000		ND (0.32)	ND (0.34)	ND (0.09)	ND (0.08)	ND (0.09)	ND (0.08)	ND (0.09)	ND (0.08)
1,1,2,2-Tetrachloroethane			ND (0.28)	ND (0.29)	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.07)
1,1,2-Trichloroethane			ND (0.29)	ND (0.30)	ND (0.23)	ND (0.23)	ND (0.24)	ND (0.22)	ND (0.25)	ND (0.22)

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	NYSDEC Part 375 SCO (Commercial)	Laboratory ID Sample ID	L1717921-08 4542-170531-1335	L1717921-13 1234-170531-0001	L1707923-07 4542-170314-1255	L1707923-08 4542-170314-1305	L1707923-04 4542-170314-1005	L1707923-05 4542-170314-1015	L1707923-01 4542-170314-0850	L1707923-02 4542-170314-0900
		Location Sample Depth (ft.) Sample Date Sample Type	Area 2C South Sidewall 1.0-1.5 05/31/2017 Normal	Area 2C South Sidewall 1.0-1.5 05/31/2017 Duplicate	A2D-01 - Area 2A Bottom 1.0-1.5 03/14/2017 Normal	A2D-01 - Area 2A Sidewall 3.0-3.5 03/14/2017 Normal	A2D-02 - Area 2A Bottom 1.0-1.5 03/14/2017 Normal	A2D-02 - Area 2A Bottom 3.0-3.5 03/14/2017 Normal	A2D-03 - Area 2A - Bottom 1.0-1.5 03/14/2017 Normal	A2D-03 - Area 2A - Bottom 3.0-3.5 03/14/2017 Normal
1,1-Dichloroethane	240000		ND (0.25)	ND (0.26)	ND (0.07)	ND (0.07)	ND (0.07)	ND (0.06)	ND (0.07)	ND (0.06)
1,1-Dichloroethene	500000		ND (0.34)	ND (0.36)	ND (0.20)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.21)	ND (0.19)
1,2,3-Trichlorobenzene			ND (0.23)	ND (0.24)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.11)
1,2,4-Trichlorobenzene			ND (0.20)	ND (0.21)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.13)	ND (0.15)	ND (0.13)
1,2,4-Trimethylbenzene	190000		ND (0.17)	ND (0.18)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.10)	ND (0.11)	ND (0.10)
1,2-Dibromo-3-chloropropane (DBCP)			ND (0.36)	ND (0.38)	ND (0.30)	ND (0.30)	ND (0.32)	ND (0.29)	ND (0.32)	ND (0.29)
1,2-Dibromoethane (Ethylene Dibromide)			ND (0.18)	ND (0.19)	ND (0.13)	ND (0.13)	ND (0.14)	ND (0.13)	ND (0.14)	ND (0.13)
1,2-Dichlorobenzene	500000		ND (0.17)	ND (0.17)	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.11)
1,2-Dichloroethane	30000		ND (0.23)	ND (0.24)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.08)	ND (0.09)	ND (0.08)
1,2-Dichloroethene (total)			-	-	ND (0.11)	ND (0.11)	0.28 J	ND (0.10)	6	0.14 J
1,2-Dichloropropane			ND (0.21)	ND (0.22)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.17)
1,3,5-Trimethylbenzene	190000		ND (0.15)	ND (0.15)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.10)
1,3-Dichlorobenzene	280000		ND (0.20)	ND (0.21)	ND (0.10)	ND (0.10)	ND (0.11)	ND (0.10)	ND (0.11)	ND (0.10)
1,4-Dichlorobenzene	130000		ND (0.17)	ND (0.17)	ND (0.10)	ND (0.10)	ND (0.11)	ND (0.10)	ND (0.11)	ND (0.10)
1,4-Dioxane	130000		ND (13)	ND (14)	ND (11)	ND (11)	ND (12)	ND (11)	ND (12)	ND (11)
2-Butanone (Methyl Ethyl Ketone)	500000		ND (0.64)	ND (0.66)	ND (0.21)	ND (0.21)	ND (0.22)	ND (0.20)	ND (0.22)	ND (0.20)
2-Hexanone			ND (0.61)	ND (0.64)	ND (0.51)	ND (0.51)	ND (0.53)	ND (0.49)	ND (0.54)	ND (0.49)
2-Phenylbutane (sec-Butylbenzene)	500000		ND (0.20)	ND (0.21)	ND (0.09)	ND (0.09)	ND (0.10)	ND (0.09)	ND (0.10)	ND (0.09)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)			ND (0.22)	ND (0.23)	ND (0.19)	ND (0.18)	ND (0.20)	ND (0.18)	ND (0.20)	ND (0.18)
Acetone	500000		ND (2.1)	ND (2.2)	ND (0.79)	5.8 J	1.7 J	1.0 J	3.5 J	ND (0.76)
Benzene	44000		ND (0.18)	ND (0.18)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.10)	ND (0.09)
Bromodichloromethane			ND (0.28)	ND (0.30)	ND (0.13)	ND (0.13)	ND (0.14)	ND (0.13)	ND (0.14)	ND (0.13)
Bromoform			ND (0.22)	ND (0.23)	ND (0.18)	ND (0.18)	ND (0.19)	ND (0.17)	ND (0.19)	ND (0.17)
Bromomethane (Methyl Bromide)			ND (0.31)	ND (0.32)	ND (0.26)	ND (0.26)	ND (0.27)	ND (0.25)	ND (0.27)	ND (0.25)
Carbon disulfide			ND (1.0) J	ND (1.0) J	ND (0.84)	ND (0.84)	ND (0.88)	ND (0.82)	ND (0.89)	ND (0.81)
Carbon tetrachloride	22000		ND (0.32)	ND (0.33)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.17)	ND (0.15)
Chlorobenzene	500000		ND (0.32)	ND (0.33)	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.26)	ND (0.28)	ND (0.26)
Chlorobromomethane			ND (0.33)	ND (0.34)	ND (0.21)	ND (0.21)	ND (0.22)	ND (0.20)	ND (0.22)	ND (0.20)
Chloroethane			ND (0.29) J	ND (0.30)	ND (0.24)	ND (0.24)	ND (0.25)	ND (0.23)	ND (0.26)	ND (0.23)
Chloroform (Trichloromethane)	350000		ND (0.34)	ND (0.36)	ND (0.28)	ND (0.28)	ND (0.30)	ND (0.27)	ND (0.30)	ND (0.27)
Chloromethane (Methyl Chloride)			ND (0.40) J	ND (0.42)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.22)	ND (0.24)	ND (0.22)
cis-1,2-Dichloroethene	500000		100 J	56 J	ND (0.11)	ND (0.11)	0.28 J	ND (0.10)	6	0.14 J
cis-1,3-Dichloropropene			ND (0.21)	ND (0.22)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.10)	ND (0.09)
Cyclohexane			ND (0.40)	ND (0.42)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.11)
Cymene (p-Isopropyltoluene)			ND (0.19)	ND (0.19)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.09)	ND (0.10)	ND (0.09)
Dibromochloromethane			ND (0.16)	ND (0.17)	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.11)
Dichlorodifluoromethane (CFC-12)			ND (0.46) J	ND (0.48) J	ND (0.14)	ND (0.14)	ND (0.15)	ND (0.14)	ND (0.15)	ND (0.14)
Ethylbenzene	390000		ND (0.16)	ND (0.16)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.09)	ND (0.10)	ND (0.09)
Isopropylbenzene (Cumene)			ND (0.18)	ND (0.19)	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.08)
m,p-Xylenes			ND (0.32)	ND (0.34)	ND (0.27)	ND (0.27)	ND (0.28)	ND (0.26)	ND (0.28)	ND (0.26)
Methyl acetate			ND (0.43)	ND (0.44)	ND (0.21)	ND (0.20)	ND (0.22)	ND (0.20)	ND (0.22)	ND (0.20)
Methyl cyclohexane			0.75 J	0.29 J	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.11)
Methyl Tert Butyl Ether	500000		ND (0.14)	ND (0.15)	ND (0.06)	ND (0.06)	ND (0.07)	ND (0.06)	ND (0.07)	ND (0.06)
Methylene chloride	500000		ND (1.5)	ND (1.6)	ND (0.84)	ND (0.84)	ND (0.88)	ND (0.82)	ND (0.90)	ND (0.81)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1717921-08	L1717921-13	L1707923-07	L1707923-08	L1707923-04	L1707923-05	L1707923-01	L1707923-02
		Sample ID	4542-170531-1335	1234-170531-0001	4542-170314-1255	4542-170314-1305	4542-170314-1005	4542-170314-1015	4542-170314-0850	4542-170314-0900
		Location	Area 2C South Sidewall	Area 2C South Sidewall	A2D-01 - Area 2A Bottom	A2D-01 - Area 2A Sidewall	A2D-02 - Area 2A Bottom	A2D-02 - Area 2A Bottom	A2D-03 - Area 2A - Bottom	A2D-03 - Area 2A - Bottom
		Sample Depth (ft.)	1.0-1.5	1.0-1.5	1.0-1.5	3.0-3.5	1.0-1.5	3.0-3.5	1.0-1.5	3.0-3.5
		Sample Date	05/31/2017	05/31/2017	03/14/2017	03/14/2017	03/14/2017	03/14/2017	03/14/2017	03/14/2017
		Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal
Naphthalene	500000		ND (0.13)	ND (0.13)	ND (0.10)	ND (0.10)	ND (0.11)	ND (0.10)	ND (0.11)	ND (0.10)
n-Butylbenzene	500000		ND (0.21)	ND (0.22)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)
n-Propylbenzene	500000		ND (0.20)	ND (0.21)	ND (0.08)	ND (0.08)	ND (0.09)	ND (0.08)	ND (0.09)	ND (0.08)
o-Xylene			ND (0.31)	ND (0.32)	ND (0.26)	ND (0.26)	ND (0.27)	ND (0.25)	ND (0.27)	ND (0.25)
Styrene			ND (0.37)	ND (0.38)	ND (0.31)	ND (0.30)	ND (0.32)	ND (0.30)	ND (0.33)	ND (0.30)
Tetrachloroethene	150000		0.86 J	ND (0.29)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.10)	ND (0.11)	ND (0.10)
Toluene	500000		ND (0.18)	ND (0.19)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.14)	ND (0.16)	ND (0.14)
trans-1,2-Dichloroethene	500000		1.3 J	0.62 J	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.17)	ND (0.16)
trans-1,3-Dichloropropene			ND (0.19)	ND (0.20)	ND (0.09)	ND (0.09)	ND (0.10)	ND (0.09)	ND (0.10)	ND (0.09)
Trichloroethene	200000		92 J	46 J	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.09)	1.1	3.1
Trichlorofluoromethane (CFC-11)			ND (0.38)	ND (0.40)	ND (0.30)	ND (0.29)	ND (0.31)	ND (0.29)	ND (0.31)	ND (0.28)
Trifluorotrichloroethane (Freon 113)			ND (0.47)	ND (0.49)	ND (0.21)	ND (0.21)	ND (0.22)	ND (0.20)	ND (0.22)	ND (0.20)
Vinyl chloride	13000		ND (0.29) J	ND (0.30) J	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.09)	0.39 J	ND (0.09)
Xylene (total)	500000		ND (0.31)	ND (0.32)	ND (0.26)	ND (0.26)	ND (0.27)	ND (0.25)	ND (0.27)	ND (0.25)

Notes and Abbreviations:

1. Results were compared to the Restricted Use Soil Cleanup Objective (SCO)
for Commercial (NYSDEC, Table 375-6.8(b), December 2006).

2. Results in dark gray shading exceed applicable criteria.

3. ND (#): Result is not detected above the indicated reporting limit.

J: Estimated result

J+: Estimated result, biased high

R: Rejected

4. Results in **bold** are detected.

* - Bottom confirmation samples were collected before excavation activities using a
geoprobe.

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1707803-07	L1707803-08	L1707803-05	L1707803-01	L1707803-02
		Sample ID	4542-170313-1430	4542-170313-1440	4542-170313-1300	4542-170313-1045	4542-170313-1105
		Location	A2D-04 - Area 2C - Bottom	A2D-04 - Area 2C - Bottom	A2D-05 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom
		Sample Depth (ft.)	1.0-1.5	3.0-3.5	3.0-3.5	1.0-1.5	3.0-3.5
		Sample Date	03/13/2017	03/13/2017	03/13/2017	03/13/2017	03/13/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal
Inorganic Compounds (mg/kg)							
Aluminum			3,300	3,100	3,200	3,500	3,500
Antimony			ND (0.33)	ND (0.32)	ND (0.33)	ND (0.34)	ND (0.32)
Arsenic	16		2.5	1.9	1.7	2.5	2.3
Barium	400		27	33	24	36	32
Beryllium	590		0.10 J	0.03 J	0.06 J	0.10 J	0.10 J
Cadmium	9.3		ND (0.08)	ND (0.08)	ND (0.09)	ND (0.09)	ND (0.08)
Calcium			41,000	82,000	37,000	38,000	41,000
Chromium			6.9	6	6.4	7	6.9
Cobalt			3.2	3.9	2.5	4.2	4.1
Copper	270		9.9	7.9	9.7	12	11
Iron			9,100	8,300	8,500	9,400	9,400
Lead	1000		7.4	6.1	4.3 J	7	6.4
Magnesium			16,000	12,000	14,000	14,000	16,000
Manganese	10000		210	300	210	250	260
Mercury	2.8		ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Nickel	310		6.9	7.8	5.7	8.5	8.4
Potassium			490	510	510	530	530
Selenium	1500		ND (0.22)	ND (0.22)	ND (0.23)	ND (0.23)	ND (0.22)
Silver	1500		ND (0.24)	ND (0.24)	ND (0.25)	ND (0.25)	ND (0.24)
Sodium			140 J	120 J	150 J	150 J	150 J
Thallium			ND (0.27)	ND (0.27)	0.40 J	ND (0.28)	ND (0.27)
Vanadium			11	8.9	11	11	11
Zinc	10000		41	62	34	43	37
PCBs (ug/kg)							
Aroclor-1016 (PCB-1016)			ND (2.96)	ND (2.89)	ND (2.88)	ND (2.98)	ND (2.82)
Aroclor-1221 (PCB-1221)			ND (3.45)	ND (3.37)	ND (3.36)	ND (3.48)	ND (3.30)
Aroclor-1232 (PCB-1232)			ND (4.39)	ND (4.29)	ND (4.28)	ND (4.42)	ND (4.19)
Aroclor-1242 (PCB-1242)			ND (4.58)	ND (4.48)	ND (4.47)	ND (4.62)	ND (4.38)
Aroclor-1248 (PCB-1248)			ND (3.16)	ND (3.09)	ND (3.08)	ND (3.18)	ND (3.02)
Aroclor-1254 (PCB-1254)			7.22 J	ND (3.01)	ND (3.00)	ND (3.10)	ND (2.94)
Aroclor-1260 (PCB-1260)			ND (2.85)	ND (2.79)	ND (2.78)	ND (2.87)	ND (2.72)
Aroclor-1262 (PCB-1262)			ND (1.86)	ND (1.82)	ND (1.81)	ND (1.87)	ND (1.77)
Aroclor-1268 (PCB-1268)			ND (5.43)	ND (5.31)	ND (5.29)	ND (5.47)	ND (5.18)
Polychlorinated biphenyls (PCBs)	1000		7.22 J	ND (1.82)	ND (1.81)	ND (1.87)	ND (1.77)
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4,5-Tetrachlorobenzene			ND (20)	ND (19)	ND (19)	ND (20)	ND (19)
2,2'-oxybis(1-Chloropropane)			ND (32)	ND (31)	ND (32)	ND (32)	ND (31)
2,3,4,6-Tetrachlorophenol			ND (38)	ND (37)	ND (37)	ND (38)	ND (37)
2,4,5-Trichlorophenol			ND (36)	ND (35)	ND (35)	ND (36)	ND (35)
2,4,6-Trichlorophenol			ND (36)	ND (35)	ND (35)	ND (36)	ND (35)
2,4-Dichlorophenol			ND (30)	ND (30)	ND (30)	ND (30)	ND (30)
2,4-Dimethylphenol			ND (62)	ND (61)	ND (61)	ND (62)	ND (61)
2,4-Dinitrophenol			ND (88)	ND (86)	ND (86)	ND (87)	ND (86)
2,4-Dinitrotoluene			ND (38)	ND (37)	ND (37)	ND (38)	ND (37)
2,6-Dinitrotoluene			ND (32)	ND (32)	ND (32)	ND (32)	ND (32)
2-Chloronaphthalene			ND (19)	ND (18)	ND (18)	ND (19)	ND (18)
2-Chlorophenol			ND (22)	ND (22)	ND (22)	ND (22)	ND (22)
2-Methylnaphthalene			ND (23)	ND (22)	ND (22)	ND (23)	ND (22)
2-Methylphenol (o-Cresol)	500000		ND (29)	ND (28)	ND (29)	ND (29)	ND (28)
2-Nitroaniline			ND (36)	ND (35)	ND (36)	ND (36)	ND (36)
2-Nitrophenol			ND (71)	ND (69)	ND (70)	ND (70)	ND (69)
3,3'-Dichlorobenzidine			ND (50)	ND (49)	ND (49)	ND (50)	ND (49)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1707803-07	L1707803-08	L1707803-05	L1707803-01	L1707803-02
		Sample ID	4542-170313-1430	4542-170313-1440	4542-170313-1300	4542-170313-1045	4542-170313-1105
		Location	A2D-04 - Area 2C - Bottom	A2D-04 - Area 2C - Bottom	A2D-05 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom
		Sample Depth (ft.)	1.0-1.5	3.0-3.5	3.0-3.5	1.0-1.5	3.0-3.5
		Sample Date	03/13/2017	03/13/2017	03/13/2017	03/13/2017	03/13/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal
3-Methylphenol	500000		ND (30)	ND (29)	ND (29)	ND (29)	ND (29)
3-Nitroaniline			ND (36)	ND (35)	ND (35)	ND (35)	ND (35)
4,6-Dinitro-2-methylphenol			ND (91)	ND (88)	ND (89)	ND (90)	ND (88)
4-Bromophenyl phenyl ether			ND (29)	ND (28)	ND (28)	ND (29)	ND (28)
4-Chloro-3-methylphenol			ND (28)	ND (27)	ND (28)	ND (28)	ND (27)
4-Chloroaniline			ND (34)	ND (33)	ND (34)	ND (34)	ND (34)
4-Chlorophenyl phenyl ether			ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
4-Nitroaniline			ND (78)	ND (76)	ND (76)	ND (78)	ND (76)
4-Nitrophenol			ND (77)	ND (75)	ND (75)	ND (76)	ND (75)
Acenaphthene	500000		ND (20)	ND (19)	ND (19)	ND (19)	ND (19)
Acenaphthylene	500000		ND (29)	ND (28)	ND (28)	ND (29)	ND (28)
Acetophenone			ND (23)	ND (23)	ND (23)	ND (23)	ND (23)
Anthracene	500000		ND (37)	ND (36)	ND (36)	ND (36)	ND (36)
Atrazine			ND (66)	ND (64)	ND (65)	ND (66)	ND (64)
Benzaldehyde			ND (51)	ND (50)	ND (50)	ND (51)	ND (50)
Benzo(a)anthracene	5600		ND (21)	ND (21)	ND (21)	ND (21)	ND (21)
Benzo(a)pyrene	1000		ND (46)	ND (45)	ND (45)	ND (46)	ND (45)
Benzo(b)fluoranthene	5600		ND (32)	ND (31)	ND (31)	ND (32)	ND (31)
Benzo(g,h,i)perylene	500000		ND (22)	ND (22)	ND (22)	ND (22)	ND (22)
Benzo(k)fluoranthene	56000		ND (30)	ND (29)	ND (30)	ND (30)	ND (29)
Biphenyl			ND (44)	ND (43)	ND (43)	ND (44)	ND (43)
bis(2-Chloroethoxy)methane			ND (19)	ND (18)	ND (18)	ND (19)	ND (18)
bis(2-Chloroethyl)ether			ND (26)	ND (25)	ND (25)	ND (25)	ND (25)
bis(2-Ethylhexyl)phthalate			ND (65)	ND (64)	ND (64)	ND (65)	ND (64)
Butyl benzylphthalate			ND (48)	ND (46)	ND (47)	ND (47)	ND (46)
Caprolactam			ND (57)	ND (56)	ND (56)	ND (57)	ND (56)
Carbazole			ND (18)	ND (18)	ND (18)	ND (18)	ND (18)
Chrysene	56000		ND (20)	ND (19)	ND (19)	ND (20)	ND (19)
Dibenz(a,h)anthracene	560		ND (22)	ND (21)	ND (21)	ND (22)	ND (21)
Dibenzofuran	350000		ND (18)	ND (17)	ND (17)	ND (18)	ND (17)
Diethyl phthalate			ND (17)	ND (17)	ND (17)	ND (17)	ND (17)
Dimethyl phthalate			ND (40)	ND (39)	ND (39)	ND (39)	ND (39)
Di-n-butylphthalate			ND (36)	ND (35)	ND (35)	ND (36)	ND (35)
Di-n-octyl phthalate			ND (64)	ND (62)	ND (63)	ND (64)	ND (63)
Fluoranthene	500000		ND (22)	ND (21)	ND (21)	ND (22)	ND (21)
Fluorene	500000		ND (18)	ND (18)	ND (18)	ND (18)	ND (18)
Hexachlorobenzene	6000		ND (21)	ND (21)	ND (21)	ND (21)	ND (21)
Hexachlorobutadiene			ND (28)	ND (27)	ND (27)	ND (27)	ND (27)
Hexachlorocyclopentadiene			ND (170)	ND (170)	ND (170)	ND (170)	ND (170)
Hexachloroethane			ND (30)	ND (30)	ND (30)	ND (30)	ND (30)
Indeno(1,2,3-cd)pyrene	5600		ND (26)	ND (26)	ND (26)	ND (26)	ND (26)
Isophorone			ND (24)	ND (24)	ND (24)	ND (24)	ND (24)
Naphthalene	500000		ND (23)	ND (22)	ND (22)	ND (23)	ND (22)
Nitrobenzene	69000		ND (28)	ND (27)	ND (27)	ND (28)	ND (27)
N-Nitrosodi-n-propylamine			ND (29)	ND (28)	ND (28)	ND (29)	ND (28)
N-Nitrosodiphenylamine			ND (22)	ND (21)	ND (21)	ND (21)	ND (21)
Pentachlorophenol	6700		ND (42)	ND (40)	ND (41)	ND (41)	ND (40)
Phenanthrene	500000		ND (23)	ND (22)	ND (22)	ND (23)	ND (22)
Phenol	500000		ND (28)	ND (28)	ND (28)	ND (28)	ND (28)
Pyrene	500000		ND (19)	ND (18)	ND (18)	ND (19)	ND (18)
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane	500000		ND (0.09)	ND (0.08)	ND (0.09)	ND (0.09)	ND (0.08)
1,1,2,2-Tetrachloroethane			ND (0.08)	ND (0.07)	ND (0.08)	ND (0.08)	ND (0.07)
1,1,2-Trichloroethane			ND (0.23)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.22)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1707803-07	L1707803-08	L1707803-05	L1707803-01	L1707803-02
		Sample ID	4542-170313-1430	4542-170313-1440	4542-170313-1300	4542-170313-1045	4542-170313-1105
		Location	A2D-04 - Area 2C - Bottom	A2D-04 - Area 2C - Bottom	A2D-05 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom
		Sample Depth (ft.)	1.0-1.5	3.0-3.5	3.0-3.5	1.0-1.5	3.0-3.5
		Sample Date	03/13/2017	03/13/2017	03/13/2017	03/13/2017	03/13/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal
1,1-Dichloroethane	240000		ND (0.07)	ND (0.06)	ND (0.07)	ND (0.07)	ND (0.06)
1,1-Dichloroethene	500000		ND (0.20)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)
1,2,3-Trichlorobenzene			ND (0.11)	ND (0.10)	ND (0.11)	ND (0.12)	ND (0.10)
1,2,4-Trichlorobenzene			ND (0.14)	ND (0.13)	ND (0.14)	ND (0.15)	ND (0.13)
1,2,4-Trimethylbenzene	190000		ND (0.11)	ND (0.10)	ND (0.11)	ND (0.11)	ND (0.10)
1,2-Dibromo-3-chloropropane (DBCP)			ND (0.30)	ND (0.28)	ND (0.31)	ND (0.32)	ND (0.28)
1,2-Dibromoethane (Ethylene Dibromide)			ND (0.13)	ND (0.12)	ND (0.13)	ND (0.14)	ND (0.12)
1,2-Dichlorobenzene	500000		ND (0.12)	ND (0.11)	ND (0.12)	ND (0.12)	ND (0.11)
1,2-Dichloroethane	30000		ND (0.09)	ND (0.08)	ND (0.09)	ND (0.09)	ND (0.08)
1,2-Dichloroethene (total)			ND (0.11)	ND (0.10)	ND (0.11)	ND (0.11)	ND (0.10)
1,2-Dichloropropane			ND (0.18)	ND (0.16)	ND (0.18)	ND (0.18)	ND (0.16)
1,3,5-Trimethylbenzene	190000		ND (0.11)	ND (0.10)	ND (0.11)	ND (0.12)	ND (0.10)
1,3-Dichlorobenzene	280000		ND (0.10)	ND (0.10)	ND (0.10)	ND (0.11)	ND (0.10)
1,4-Dichlorobenzene	130000		ND (0.11)	ND (0.10)	ND (0.11)	ND (0.11)	ND (0.10)
1,4-Dioxane	130000		ND (11)	ND (10)	ND (11)	ND (12)	ND (10)
2-Butanone (Methyl Ethyl Ketone)	500000		ND (0.21)	ND (0.20)	ND (0.21)	ND (0.22)	ND (0.19)
2-Hexanone			ND (0.51)	ND (0.48)	ND (0.52)	ND (0.54)	ND (0.48)
2-Phenylbutane (sec-Butylbenzene)	500000		ND (0.09)	ND (0.09)	ND (0.09)	ND (0.10)	ND (0.09)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)			ND (0.19)	ND (0.18)	ND (0.19)	ND (0.20)	ND (0.17)
Acetone	500000		ND (0.80)	ND (0.74)	ND (0.80)	ND (0.83)	ND (0.74)
Benzene	44000		ND (0.09)	0.12 J	ND (0.09)	ND (0.10)	ND (0.08)
Bromodichloromethane			ND (0.13)	ND (0.12)	ND (0.13)	ND (0.14)	ND (0.12)
Bromoform			ND (0.18)	ND (0.17)	ND (0.18)	ND (0.19)	ND (0.17)
Bromomethane (Methyl Bromide)			ND (0.26)	ND (0.24)	ND (0.26)	ND (0.27)	ND (0.24)
Carbon disulfide			ND (0.85)	ND (0.79)	ND (0.85)	ND (0.88)	ND (0.79)
Carbon tetrachloride	22000		ND (0.16)	ND (0.15)	ND (0.16)	ND (0.17)	ND (0.15)
Chlorobenzene	500000		ND (0.27)	ND (0.25)	ND (0.27)	ND (0.28)	ND (0.25)
Chlorobromomethane			ND (0.21)	ND (0.20)	ND (0.21)	ND (0.22)	ND (0.20)
Chloroethane			ND (0.24)	ND (0.23)	ND (0.24)	ND (0.25)	ND (0.22)
Chloroform (Trichloromethane)	350000		ND (0.28)	ND (0.26)	ND (0.29)	ND (0.30)	ND (0.26)
Chloromethane (Methyl Chloride)			ND (0.22)	ND (0.21)	ND (0.23)	ND (0.24)	ND (0.21)
cis-1,2-Dichloroethene	500000		ND (0.11)	ND (0.10)	ND (0.11)	ND (0.11)	ND (0.10)
cis-1,3-Dichloropropene			ND (0.09)	ND (0.08)	ND (0.09)	ND (0.09)	ND (0.08)
Cyclohexane			ND (0.11)	0.13 J	ND (0.11)	ND (0.12)	ND (0.10)
Cymene (p-Isopropyltoluene)			ND (0.10)	ND (0.09)	ND (0.10)	ND (0.10)	ND (0.09)
Dibromochloromethane			ND (0.12)	ND (0.11)	ND (0.12)	ND (0.12)	ND (0.11)
Dichlorodifluoromethane (CFC-12)			ND (0.15)	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)
Ethylbenzene	390000		ND (0.10)	ND (0.09)	ND (0.10)	ND (0.10)	ND (0.09)
Isopropylbenzene (Cumene)			ND (0.08)	ND (0.07)	ND (0.08)	ND (0.08)	ND (0.07)
m,p-Xylenes			ND (0.27)	ND (0.25)	ND (0.27)	ND (0.28)	ND (0.25)
Methyl acetate			ND (0.21)	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)
Methyl cyclohexane			ND (0.12)	ND (0.11)	ND (0.12)	ND (0.12)	ND (0.11)
Methyl Tert Butyl Ether	500000		ND (0.07)	ND (0.06)	ND (0.07)	ND (0.07)	ND (0.06)
Methylene chloride	500000		ND (0.85)	ND (0.79)	ND (0.85)	ND (0.89)	ND (0.79)

TABLE III
SOIL CONFIRMATION ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC Part 375 SCO (Commercial)	Laboratory ID	L1707803-07	L1707803-08	L1707803-05	L1707803-01	L1707803-02
		Sample ID	4542-170313-1430	4542-170313-1440	4542-170313-1300	4542-170313-1045	4542-170313-1105
		Location	A2D-04 - Area 2C - Bottom	A2D-04 - Area 2C - Bottom	A2D-05 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom	A2D-06 - Area 2C - Bottom
		Sample Depth (ft.)	1.0-1.5	3.0-3.5	3.0-3.5	1.0-1.5	3.0-3.5
		Sample Date	03/13/2017	03/13/2017	03/13/2017	03/13/2017	03/13/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal
Naphthalene	500000	ND (0.11)	ND (0.10)	ND (0.11)	ND (0.11)	ND (0.10)	
n-Butylbenzene	500000	ND (0.09)	ND (0.08)	ND (0.09)	ND (0.09)	ND (0.08)	
n-Propylbenzene	500000	ND (0.08)	ND (0.08)	ND (0.08)	ND (0.09)	ND (0.08)	
o-Xylene		ND (0.26)	ND (0.24)	ND (0.26)	ND (0.27)	ND (0.24)	
Styrene		ND (0.31)	ND (0.29)	ND (0.31)	ND (0.32)	ND (0.29)	
Tetrachloroethene	150000	ND (0.11)	ND (0.10)	ND (0.11)	1.5	2	
Toluene	500000	ND (0.15)	0.22 J	ND (0.15)	ND (0.16)	ND (0.14)	
trans-1,2-Dichloroethene	500000	ND (0.16)	ND (0.15)	ND (0.16)	ND (0.17)	ND (0.15)	
trans-1,3-Dichloropropene		ND (0.09)	ND (0.09)	ND (0.09)	ND (0.10)	ND (0.09)	
Trichloroethene	200000	0.11 J	0.44 J	ND (0.10)	6.3	13	
Trichlorofluoromethane (CFC-11)		ND (0.30)	ND (0.28)	ND (0.30)	ND (0.31)	ND (0.28)	
Trifluorotrichloroethane (Freon 113)		ND (0.21)	ND (0.20)	ND (0.21)	ND (0.22)	ND (0.20)	
Vinyl chloride	13000	ND (0.09)	ND (0.08)	ND (0.09)	ND (0.09)	ND (0.08)	
Xylene (total)	500000	ND (0.26)	ND (0.24)	ND (0.26)	ND (0.27)	ND (0.24)	

Notes and Abbreviations:

1. Results were compared to the Restricted Use Soil Cleanup Objective (SCO)
for Commercial (NYSDEC, Table 375-6.8(b), December 2006).

2. Results in dark gray shading exceed applicable criteria.

3. ND (#): Result is not detected above the indicated reporting limit.

J: Estimated result

J+: Estimated result, biased high

R: Rejected

4. Results in **bold** are detected.

* - Bottom confirmation samples were collected before excavation activities using a
geoprobe.

TABLE IV
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

NYSDEC TOGS Table I Class GA	Well ID	MW-1I	MW-1IR (offset 10-15 feet northwest MW-1I)			MW-2	MW-2R (reinstalled in place of MW-2)			
	Ground Elevation (ft. AMSL)	554.88	554.82			554.85	554.8			
	Screen Interval (ft. AMSL)	530.88-520.88	530.82-520.82			547.35-537.35	547.3-537.3			
	Screen Interval (ft. bgs)	24.0-34.0	24.0-34.0			7.5-17.5	7.5-17.5			
	Laboratory ID	L1708209-01	L1723031-05	L1728747-02	L1734681-03	L1708209-04	L1722787-01	L1728963-06	L1734925-11	L1734925-10
	Sample ID	4542-170316-1540	7006-170706-1300	7006-170816-1500	4125-092717-1410	4542-170317-1400	7006-170705-1100	4542-170817-1010	4125-092817-1010	4125-092817-0001
	Sample Date	03/16/2017	07/06/2017	08/16/2017	09/27/2017	03/17/2017	07/05/2017	08/17/2017	09/28/2017	09/28/2017
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Field Duplicate
Volatile Organic Compounds (VOCs) (ug/L)										
cis-1,2-Dichloroethene	5	ND (1400)	5500 J	5500 J	5500 J	13	200	140	100	90
1,1-Dichloroethene	5	--	ND (840)	ND (840)	ND (420)	--	1.9	0.75	0.29 J	0.27 J
Tetrachloroethene	5	ND (360)	ND (900)	ND (900)	ND (450)	0.23 J	1.2	1.0	ND (0.18)	ND (0.18)
Trichloroethene	5	140000	550000	500000	580000	5.9	150	34 J+	2.3 J	3.2 J
Vinyl chloride	2	ND (140)	940 J	680 J	860 J	2.4	4.6	27	130 J	85 J
Other (mg/L)										
Total Organic Carbon	--	2.76	8.51	12.1	162	7.12	26.2	16.8	13	12.8
Sulfate	250	9.4 J+	150	170	200	10 J+	ND (1.4)	ND (1.4)	1.7 J	ND (1.4)
Iron, Dissolved	0.3	ND (0.0191)	0.0351 J	ND (0.0191)	ND (0.0191)	0.248	2.52	2.61	2.34	2.26
Iron, Total	0.3	0.531	1.56	0.852	0.895	7.79	2.44	2.68	2.28	2.40 J
Ethene	--	--	--	122	115	--	--	27.4	83.6	50.0 J
Chloride	250	--	--	220	260	--	--	20	28	19 J
Field Parameters										
Temperature (°C)	--	10.1	15.3	16.3	26.2	10.5	16.5	18.2		18.3
pH	--	7.72	7.54	7.71	7.67	7.51	7.02	7.2		7.22
Conductivity (ms/cm)	--	0.287	1.44	1.4	1.42	0.513	0.02	0.941		1.03
Dissolved Oxygen (mg/L)	--	4.06	0.35	0.28	0.32	3.64	3.05	0.14		0.22
Turbidity (NTU)	--	14	44.4	45	44.2	2122	8.6	2.08		7.94
ORP/eH (mv)	--	-27.1	45.5	48.5	-52.5	-108.1	-67.5	-159.2		-159.2

Notes and Abbreviations:
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6. mg/L = milligrams per liter
7. ug/L = micrograms per liter
8. Exceeds the NYSDEC TOGS Criteria
J = result is an estimated value
J- = results is an estimated value with a potential low bias
J+ = result is an estimated value, with a potential high bias
D = indicates reanalysis of sample with additional dilution to address exceedance
R = result is rejected as unusable
N = normal sample
FD = field duplicate
**: Exact installation date is unknown, but was prior to 10/14/96. Construction details are not known.

TABLE IV
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

NYSDEC TOGS Table I Class GA	Well ID	MW-5DR				MW-8	MW-8R (reinstalled in place of MW-8)				
	Ground Elevation (ft. AMSL)	553.4				555.34	555.28				
	Screen Interval (ft. AMSL)	489.9-479.9				548.34-538.34	548.28-538.28				
	Screen Interval (ft. bgs)	63.5-73.5				7.0-17.0	7.0-17.0				
	Laboratory ID	L1708541-03	L1723238-04	L1729197-02	L1734925-09	L1709099-06	L1722787-03	L1722787-06	L1728747-01	L1728747-05	L1734681-02
	Sample ID	4542-170320-1630	7006-170707-1100	7006-170818-1105	4125-092817-1455	4542-170323-1000	7006-170705-1355	1234-170705-0002	7006-170816-1240	1234-170816-0002	4125-092717-1200
	Sample Date	03/20/2017	07/07/2017	08/18/2017	09/28/2017	03/22/2017	07/05/2017	07/05/2017	08/16/2017	08/16/2017	09/27/2017
Sample Type		Normal	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal
Volatile Organic Compounds (VOCs) (ug/L)											
cis-1,2-Dichloroethene	5	ND (14)	ND (0.70)	ND (0.70)	ND (0.70)	15 J	250	200	350	320	4.9
1,1-Dichloroethene	5	--	ND (0.17)	ND (0.17)	ND (0.17)	--	1.1	1.2	1.0 J	1.1	ND
Tetrachloroethene	5	ND (3.6)	ND (0.18)	ND (0.18)	ND (0.18)	ND (1.8)	ND (0.36)	ND (0.18)	ND (0.72)	ND (0.36)	ND
Trichloroethene	5	810 J-	1.5	3.2	3.9	710	41	39	ND (0.70)	1.2	0.18 J
Vinyl chloride	2	ND (1.4)	ND (0.07)	ND (0.07)	ND (0.07)	ND (0.71)	2.2	2.4	27	35	75
Other (mg/L)											
Total Organic Carbon	--	1.12	1.19	1.08	1.41	1.59 J+	116	105	142	132	12.2
Sulfate	250	17	15	16	18	24	ND (1.4)	ND (1.4)	ND (1.4)	ND (1.4)	1.6
Iron, Dissolved	0.3	0.0699	0.418	0.0976	0.104	ND (0.0191)	2.57	2.64	3.06	3.12	5
Iron, Total	0.3	0.624	5.98	0.396	0.72	13 J-	2.93	2.74	3.67	3.55	4.98
Ethene	--	--	--	0.593	ND	--	--	--	10.3	11.8	52.2
Chloride	250	--	--	1.2 R	1.7 J+	--	--	--	19	18	16
Field Parameters											
Temperature (°C)	--	11.8	14.2	15.2	14.3	10.5		17		19.7	22
pH	--	8.14	8.02	7.94	7.87	7.52		6.83		6.96	6.85
Conductivity (ms/cm)	--	0.549	0.56	0.548	0.545	0.649		0.78		0.91	1.03
Dissolved Oxygen (mg/L)	--	0.49	0.99	0.14	0.19	4.13		0.13		0.27	0.15
Turbidity (NTU)	--	29	11	10.2	40.9	3061		9.9		12	11.7
ORP/eH (mv)	--	-91.7	-63.5	-80.4	-111.1	-70.7		-173.1		-58.5	-102.9

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J+ = result is an estimated value, with a potential high bias
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R = result is rejected as unusable
N = normal sample
FD = field duplicate
**: Exact installation date is unknown, but was prior to 10/14/96. Construction details are not known.

TABLE IV
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

NYSDEC TOGS Table I Class GA		Well ID	MW-22	MW-22R (reinstalled in place of MW-22)			MW-27	MW-27R (reinstalled in place of MW-27)			MW-38			
		Ground Elevation (ft. AMSL)	555.36	555.22			554.87	554.82			553.98			
		Screen Interval (ft. AMSL)	550.36-540.36	550.22-540.22			548.87-543.87	548.82-543.82			541.98-531.98			
		Screen Interval (ft. bgs)	5.0-15.0	5.0-15.0			6.0-11.0	6.0-11.0			12.0-22.0			
		Laboratory ID	L1709099-01	L1722787-04	L1728963-08	L1735106-02	L1709099-02	L1722787-02	L1728747-03	L1734925-07	L170542-02	Unable to collect a sample during the July, August, and September sampling events due to ISCR amendment present in the well.		
		Sample ID	4542-170322-1040	4542-170705-1430	4542-170817-1250	7006-092917-1145	4542-170322-1335	4542-170705-1135	4542-170816-1440	1425-092817-1225	4542-170320-1325			
		Sample Date	03/22/2017	07/05/2017	08/17/2017	09/29/2017	03/22/2017	07/05/2017	08/16/2017	09/28/2017	03/20/2017			
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal				
Volatile Organic Compounds (VOCs) (ug/L)														
cis-1,2-Dichloroethene	5	18	2.3 J	4.9	12	ND (0.70)	2.4 J	9.4	7.5	9400 J	--	--	--	
1,1-Dichloroethene	5	--	ND (0.17)	ND (0.17)	ND	--	ND (0.17)	ND (0.17)	ND	--	--	--	--	
Tetrachloroethene	5	4.2	2	2.3	0.21 J	ND (0.18)	0.56	ND (0.18)	0.23	ND (1800)	--	--	--	
Trichloroethene	5	6.6	4.1	3.4 J+	2.6	0.94	4	2.4	3.9	690000	--	--	--	
Vinyl chloride	2	2.3	0.12 J	0.22 J	0.25	ND (0.07)	ND (0.07)	0.32 J	1.2	ND (710)	--	--	--	
Other (mg/L)														
Total Organic Carbon	--	3.83	6.56	4.42	4.48	3.25	2.38	3.02	3.77	8.18	--	--	--	
Sulfate	250	5.0 J+	42 J+	42	62	27	ND (1.4)	15 J+	76	59	--	--	--	
Iron, Dissolved	0.3	ND (0.0191)	0.698	0.413	0.538	0.676	0.134	0.271	0.382	0.0212 J	--	--	--	
Iron, Total	0.3	21.2 J-	1.22	0.567	0.811	1.69 J-	0.173	0.205	0.423	0.794	--	--	--	
Ethene	--	--	--	ND (0.500)	ND	--	--	ND (0.500)	ND	--	--	--	--	
Chloride	250	--	--	30	47	--	--	6.6	6.2	--	--	--	--	
Field Parameters														
Temperature (°C)	--	7.2	16.4	18.9	18.1	6.9	17.8	20.3	20.0	9.3	--	--	--	
pH	--	7.55	7.75	7.33	7.22	7.23	7.62	7.5	7.35	7.33	--	--	--	
Conductivity (ms/cm)	--	0.619	0.369	0.606	0.83	0.41	0.277	0.422	0.556	4.78	--	--	--	
Dissolved Oxygen (mg/L)	--	13.05	0.13	0.38	0.5	0.25	0.24	0.14	0.11	3.41	--	--	--	
Turbidity (NTU)	--	2443	32.5	12.7	19	31.6	2.57	1.31	7.12	19.7	--	--	--	
ORP/eH (mv)	--	-18.2	-160.1	-125.1	-92.1	-174	-62.2	-99.6	-107.9	-45.7	--	--	--	

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TABLE IV
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC TOGS Table I Class GA	Well ID	MW-54					MW-55				MW-58			
		Ground Elevation (ft. AMSL)	545.46					544.58				544.24			
		Screen Interval (ft. AMSL)	543.46-533.46					542.58-532.58				542.24-532.24			
		Screen Interval (ft. bgs)	2.0-12.0					2.0-12.0				2.0-12.0			
		Laboratory ID	L1709099-09	L1723238-03	L1724067-01	L1728963-05	L1734925-08	L1709099-10	L1723238-01	L1728963-01	L1734925-06	L1709099-05	L1723031-07	L1728963-03	L1735106-05
		Sample ID	4542-170323-1640	7006-170706-1905	4257-071317-1605	7006-170816-2115	4125-092717-1745	4542-170323-1825	7006-170706-1735	7006-170816-1840	7006-092717-1700	4527-170322-1900	7006-170706-1605	7006-170816-1950	4125-092817-1700
		Sample Date	03/23/2017	07/06/2017	07/13/2017	08/16/2017	09/27/2017	03/23/2017	07/06/2017	08/16/2017	09/27/2017	03/22/2017	07/06/2017	08/16/2017	09/28/2017
		Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Volatile Organic Compounds (VOCs) (ug/L)															
cis-1,2-Dichloroethene	5	400 J	420	200	200	200	ND (0.70)	ND (0.70)	4.8	ND	ND (0.70)	ND (0.70)	ND (1.8)	ND	
1,1-Dichloroethene	5	--	ND (17)	ND (25)	ND (8.4)	ND	--	ND (0.17)	0.29 J	ND	--	ND (0.17)	ND (1.2)	ND	
Tetrachloroethene	5	ND (36)	ND (18)	ND (25)	ND (9.0)	ND	ND (0.18)	ND (0.18)	ND (0.18)	ND	ND (0.18)	ND (0.18)	ND (1.2)	ND	
Trichloroethene	5	13000	12000	8500	6800 J+	5600	15	61	740 J+	17	26	77	260 J+	4.2	
Vinyl chloride	2	50 J	49 J	ND (50)	25 J	18	ND (0.07)	ND (0.07)	0.60 J	ND	ND (0.07)	0.08 J	ND (2.5)	ND	
Other (mg/L)															
Total Organic Carbon	--	5.3	--	4.43	3.71	4.33	--	--	--	--	--	--	--	--	
Sulfate	250	67	--	52	56	56	--	--	--	--	--	--	--	--	
Iron, Dissolved	0.3	ND (0.0191)	--	0.0436 J	ND (0.0191)	ND	--	--	--	--	--	--	--	--	
Iron, Total	0.3	0.54 J-	--	0.479	0.487	0.137	--	--	--	--	--	--	--	--	
Ethene	--	--	--	--	7.26	5.97	--	--	--	--	--	--	--	--	
Chloride	250	--	--	--	620	730	--	--	--	--	--	--	--	--	
Field Parameters															
Temperature (°C)	--	6.9	18.4	18.1	20.2	22.3	--	--	--	--	--	--	--	--	
pH	--	7.12	6.93	6.85	7.13	7.07	--	--	--	--	--	--	--	--	
Conductivity (ms/cm)	--	4.06	3.72	3.65	3.06	2.97	--	--	--	--	--	--	--	--	
Dissolved Oxygen (mg/L)	--	0.39	0.4	0.5	0.45	0.32	--	--	--	--	--	--	--	--	
Turbidity (NTU)	--	14.4	33.7	25.2	10.5	5.8	--	--	--	--	--	--	--	--	
ORP/eH (mv)	--	-55.4	65.1	89.9	32.1	28.5	--	--	--	--	--	--	--	--	

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J = result is an estimated value
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Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

NYSDEC TOGS Table I Class GA	Well ID	MW-62				MW-63				MW-69			
	Ground Elevation (ft. AMSL)	554.52				553.33				552.05			
	Screen Interval (ft. AMSL)	546.52-536.52				540.33-530.33				549.05-539.05			
	Screen Interval (ft. bgs)	8.0-18.0				13.0-23.0				3.0-13.0			
	Laboratory ID	L1708541-01	Unable to collect a sample during the July, August, and September sampling events due to ISCR amendment present in the well.				L1708541-04	L1723238-05	L1729197-04	L1735106-06	L1708541-07	L1723031-01	L1728963-07
Sample ID	4542-170320-1055	4542-170320-1845					4542-170707-1400	7006-170818-1440	4125-092817-1830	4542-170321-1520	7006-170706-0945	7006-170817-1025	4125-092717-1230
Sample Date	03/20/2017	03/20/2017					07/07/2017	08/18/2017	09/28/2017	03/21/2017	07/06/2017	08/17/2017	09/27/2017
Sample Type	Normal	Normal					Normal	Normal	Normal	Normal	Normal	Normal	Normal
Volatile Organic Compounds (VOCs) (ug/L)													
cis-1,2-Dichloroethene	5	78	--	--	--	8.7 J	17	17	11	0.71 J	ND (0.70)	0.85 J	ND
1,1-Dichloroethene	5	--	--	--	--	--	ND (0.17)	ND (0.17)	ND	--	ND (0.17)	ND (0.5)	ND
Tetrachloroethene	5	ND (1.8)	--	--	--	ND (0.90)	ND (0.18)	ND (0.18)	ND	ND (0.18)	ND (0.18)	ND (0.18)	ND
Trichloroethene	5	860 J-	--	--	--	250 J-	0.37 J	2.8	2.7	45 J-	ND (0.18)	16 J+	2.2
Vinyl chloride	2	ND (0.71)	--	--	--	ND (0.36)	0.07 J	ND (0.70)	4.2	0.81 J	0.79 J	0.87 J	0.39
Other (mg/L)													
Total Organic Carbon	--	--	--	--	--	3.34	30.2	123	355	--	--	--	--
Sulfate	250	--	--	--	--	17	ND (1.4)	ND (1.4)	1.5	--	--	--	--
Iron, Dissolved	0.3	--	--	--	--	0.0697	3.48	8.79	45.9	--	--	--	--
Iron, Total	0.3	--	--	--	--	2.68	5.22	10	49.4	--	--	--	--
Ethene	--	--	--	--	--	--	--	0.602	1.48	--	--	--	--
Chloride	250	--	--	--	--	--	--	260	270	--	--	--	--
Field Parameters													
Temperature (°C)	--	--	--	--	--	9.8	14.6	15.8	16.4	--	--	--	--
pH	--	--	--	--	--	7.46	7.73	7.07	6.62	--	--	--	--
Conductivity (ms/cm)	--	--	--	--	--	1.37	1.65	1.93	2.34	--	--	--	--
Dissolved Oxygen (mg/L)	--	--	--	--	--	0.18	0.06	0.03	0.06	--	--	--	--
Turbidity (NTU)	--	--	--	--	--	250	84.7	25.5	30.1	--	--	--	--
ORP/eH (mv)	--	--	--	--	--	-115.5	-173.4	-110.3	-77	--	--	--	--

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TABLE IV
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Former AB Dick Facility
811 Jefferson Road
Henrietta, New York

	NYSDEC TOGS Table I Class GA	Well ID	MW-70				MW-74					MW-76			
		Ground Elevation (ft. AMSL)	549.26				511.11					549.2			
		Screen Interval (ft. AMSL)	546.06-536.06				508.11-498.11					530.7-520.7			
		Screen Interval (ft. bgs)	3.2-13.2				3.0-13.0					18.5-28.5			
		Laboratory ID	L1708541-08	L1723031-03	L1728963-09	L1734681-05	L1709099-07	L1709099-12	L1723031-06	L1728963-10	L1734925-02	L1708541-05	L1723031-02	L1729197-01	L1734925-03
		Sample ID	4542-170323-1500	7006-170706-1057	7006-170817-1245	4125-092717-1400	4542-170323-1225	1234-170323-0002	4542-170706-1430	7006-170817-1430	7006-092817-1030	4542-170321-1025	4542-170706-1030	4542-170818-1020	7006-092817-1410
		Sample Date	03/23/2017	07/06/2017	08/17/2017	09/27/2017	03/23/2017	03/23/2017	07/06/2017	08/17/2017	09/28/2017	03/21/2017	07/06/2017	08/18/2017	09/28/2017
Sample Type	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal		
Volatile Organic Compounds (VOCs) (ug/L)															
cis-1,2-Dichloroethene	5	ND (0.70)	ND (0.70)	ND (0.70)	ND	930	950	840	920	690	ND (2.8)	ND (0.70)	ND (0.70)	0.82 J	
1,1-Dichloroethene	5	--	ND (0.17)	ND (0.18)	ND	--	--	3.6 J	3.7 J	2.8	--	ND (0.17)	ND (0.17)	ND	
Tetrachloroethene	5	ND (0.18)	ND (0.18)	ND (0.18)	ND	ND (1.8)	ND (1.8)	ND (1.8)	ND (1.8)	ND	ND (0.72)	ND (0.18)	ND (0.18)	ND	
Trichloroethene	5	10 J-	ND (0.18)	18 J+	ND	46	44	18	39 J+	16	180	3.6	1.8	1.3	
Vinyl chloride	2	ND (0.07)	ND (0.70)	ND (0.17)	ND	320	320	350	420	300	ND (0.28)	ND (0.70)	ND (0.07)	0.25	
Other (mg/L)															
Total Organic Carbon	--	--	--	--	--	7.47	7.67	7.77	7.6	7.6	--	--	--	--	
Sulfate	250	--	--	--	--	47	31	33	36	34	--	--	--	--	
Iron, Dissolved	0.3	--	--	--	--	1.7	1.60	1.54	1.16	1.2	--	--	--	--	
Iron, Total	0.3	--	--	--	--	2.54 J-	2.44 J-	2.09	1.5	1.51	--	--	--	--	
Ethene	--	--	--	--	--	--	--	--	6.83	6.13	--	--	--	--	
Chloride	250	--	--	--	--	--	--	--	94	97	--	--	--	--	
Field Parameters															
Temperature (°C)	--	--	--	--	--	8.5	--	19.9	22.1	20.6	--	--	--	--	
pH	--	--	--	--	--	7.05	--	7.14	6.95	6.98	--	--	--	--	
Conductivity (ms/cm)	--	--	--	--	--	1.49	--	1.6	1.44	1.41	--	--	--	--	
Dissolved Oxygen (mg/L)	--	--	--	--	--	0.22	--	0.16	0.2	0.28	--	--	--	--	
Turbidity (NTU)	--	--	--	--	--	16	--	17.1	18.7	19.4	--	--	--	--	
ORP/eH (mv)	--	--	--	--	--	-99.8	--	-62.5	-25	-16	--	--	--	--	

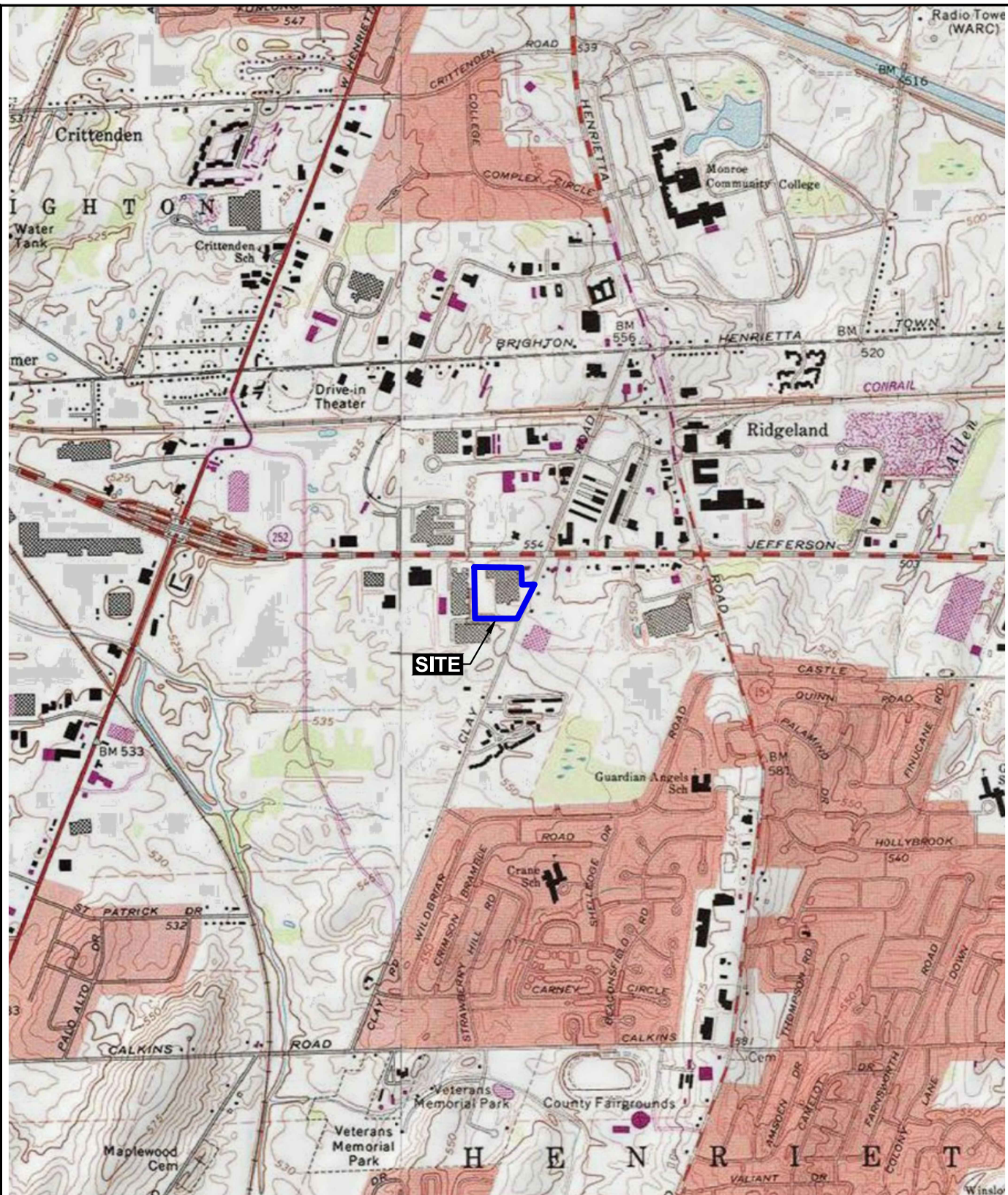
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TABLE IV
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NYSDEC TOGS Table I Class GA	Well ID	MW-77				MW-78				UCB-MW-03			
	Ground Elevation (ft. AMSL)	544.1				544.1				548.53			
	Screen Interval (ft. AMSL)	533.1-522.1				521.1-511.1				See Notes**			
	Screen Interval (ft. bgs)	11.0-22.0				23.0-33.0				Measured Well Depth: 14.85'bgs			
	Laboratory ID	L1709099-04	L1723238-02	L1728963-02	L1735106-07	L1709099-03	L1723031-08	L1728963-04	L1734925-05	L1708541-06	L1723031-04	L1729197-03	L1734925-04
	Sample ID	4527-170322-1755	4542-170706-1850	4542-170816-1920	7006-092817-1840	4527-170322-1650	4542-170706-1620	4542-170816-2040	7006-092717-1820	4542-170321-1245	4542-170706-1240	4542-170818-1230	7006-092817-1600
	Sample Date	03/22/2017	07/06/2017	08/16/2017	09/28/2017	03/22/2017	07/06/2017	08/16/2017	09/27/2017	03/21/2017	07/06/2017	08/18/2017	09/28/2017
Sample Type		Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Volatile Organic Compounds (VOCs) (ug/L)													
cis-1,2-Dichloroethene	5	1.2 J	0.84 J	0.78 J	0.84 J	17	10	ND (0.70)	1.0	ND (1.4)	ND (0.70)	ND (0.70)	ND
1,1-Dichloroethene	5	--	ND (0.17)	ND (0.50)	ND	--	ND (0.17)	ND (0.17)	ND	--	ND (0.17)	ND (0.17)	ND
Tetrachloroethene	5	ND (0.18)	ND (0.18)	ND (0.50)	ND	ND (0.36)	ND (0.18)	ND (0.18)	ND	ND (0.36)	ND (0.18)	ND (0.18)	ND
Trichloroethene	5	58	2.5	1.5 J+	1.2	200	0.5	0.49 J+	0.59	86 J-	0.32 J	0.21 J	0.26
Vinyl chloride	2	ND (0.07)	ND (0.07)	ND (1.0)	ND	ND (0.14)	140	2.0	0.4	ND (0.14)	ND (0.70)	ND (0.70)	ND
Other (mg/L)													
Total Organic Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	250	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Dissolved	0.3	--	--	--	--	--	--	--	--	--	--	--	--
Iron, Total	0.3	--	--	--	--	--	--	--	--	--	--	--	--
Ethene	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	250	--	--	--	--	--	--	--	--	--	--	--	--
Field Parameters													
Temperature (°C)	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	--	--	--	--	--	--	--	--	--	--	--	--	--
Conductivity (ms/cm)	--	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Oxygen (mg/L)	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbidity (NTU)	--	--	--	--	--	--	--	--	--	--	--	--	--
ORP/eH (mv)	--	--	--	--	--	--	--	--	--	--	--	--	--

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FIGURES



MAP SOURCE: ESRI

SITE COORDINATES: 43°5'7"N, 77°37'9"W



**HALEY
ALDRICH**

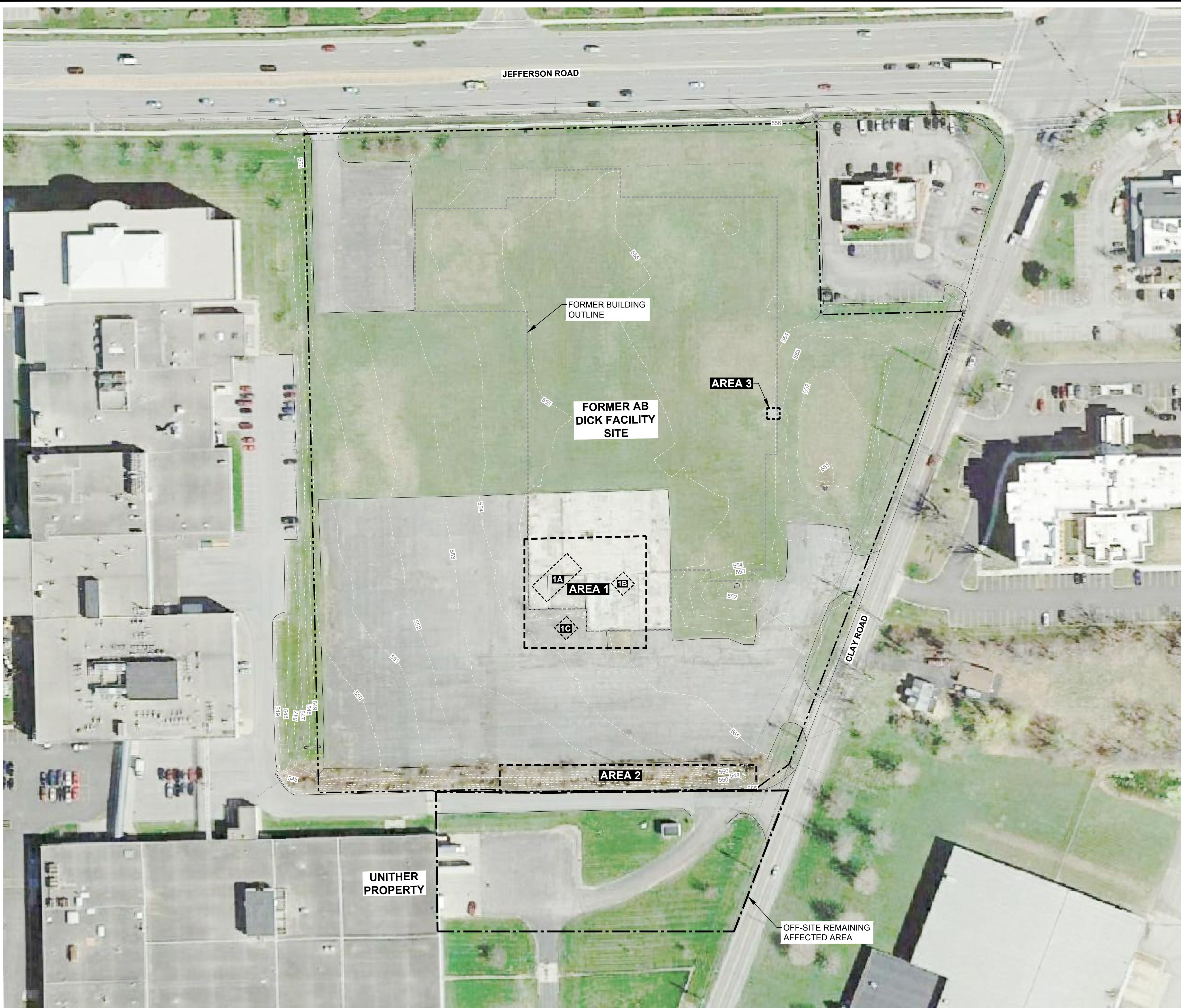
FORMER AB DICK FACILITY SITE
 811 JEFFERSON ROAD
 ROCHESTER, NEW YORK

SITE LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
 NOVEMBER 2017

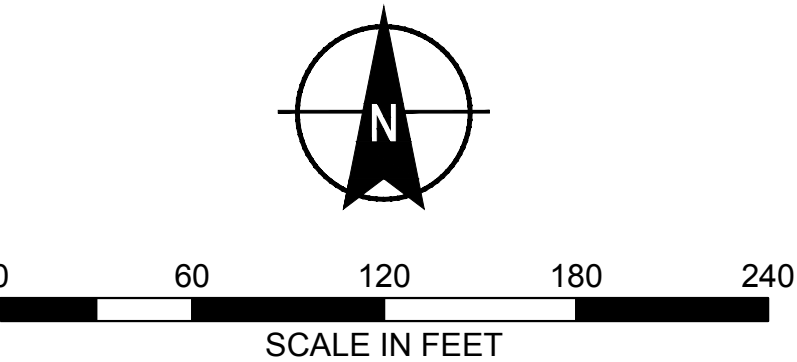
FIGURE 1

LUCIO, SAM
WHALEYALDRICH.COM\SHAREPOINT\COMMON\128437_811.JEFFERSON ROAD\CAD\FIGURES\BMP\128437_009_FIG-2_SITE PLAN.DWG
Printed: 1/12/2017 6:07 PM Layout: FIGURE 2



- LEGEND**
- PROPERTY LINE / SITE BOUNDARY
 - - - OFFSITE REMAINING AFFECTED AREA
 - AREA OF CONCERN
 - FORMER FACILITY BUILDING FOOTPRINT
 - EDGE OF CONCRETE/PAVEMENT
 - ✕ EXISTING IRON ROD
 - ✕ EXISTING IRON PIPE
 - UTILITY POLE
 - DECIDUOUS TREE
 - MANHOLE
 - ⊞ CATCH BASIN
 - ⊞ WATER OR GAS VALVE
 - LIGHT POLE
 - RW --- RW --- RIGHT-OF-WAY LINE
 - W --- W --- WATER PIPELINE
 - TU --- TU --- BURIED TELEPHONE CABLE
 - ED --- ED --- UNDERGROUND ELECTRIC LINES
 - EO --- EO --- OVERHEAD ELECTRIC LINES
 - SAN --- SAN --- SANITARY SEWER
 - STM --- STM --- STORM SEWER
 - G --- G --- GAS LINE

- NOTES:**
1. BASE MAP PROVIDED BY HUNT ENGINEERS ARCHITECTS SURVEYORS, TAX PARCEL NO. 162.08-1-3, JOB NO. 5384-002, DRAWING NAME 5384-002.DWG, DATED AUGUST 23, 2012.
 2. SOUTHERN PROPERTY BOUNDARY LINE PROVIDED BY McFARLAND JOHNSON, MARCH 2016.



**HALEY
ALDRICH**

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200 Town Centre Drive, Suite 2
Rochester, NY 14623-4264
Tel: 585.359.9000
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www.haleyaldrich.com

Project No.: 128437-010
Scale: AS SHOWN
Date: NOVEMBER 2017
Drawn By: KV
Designed By: KV
Checked By: SM
Approved By: SM
Stamp:

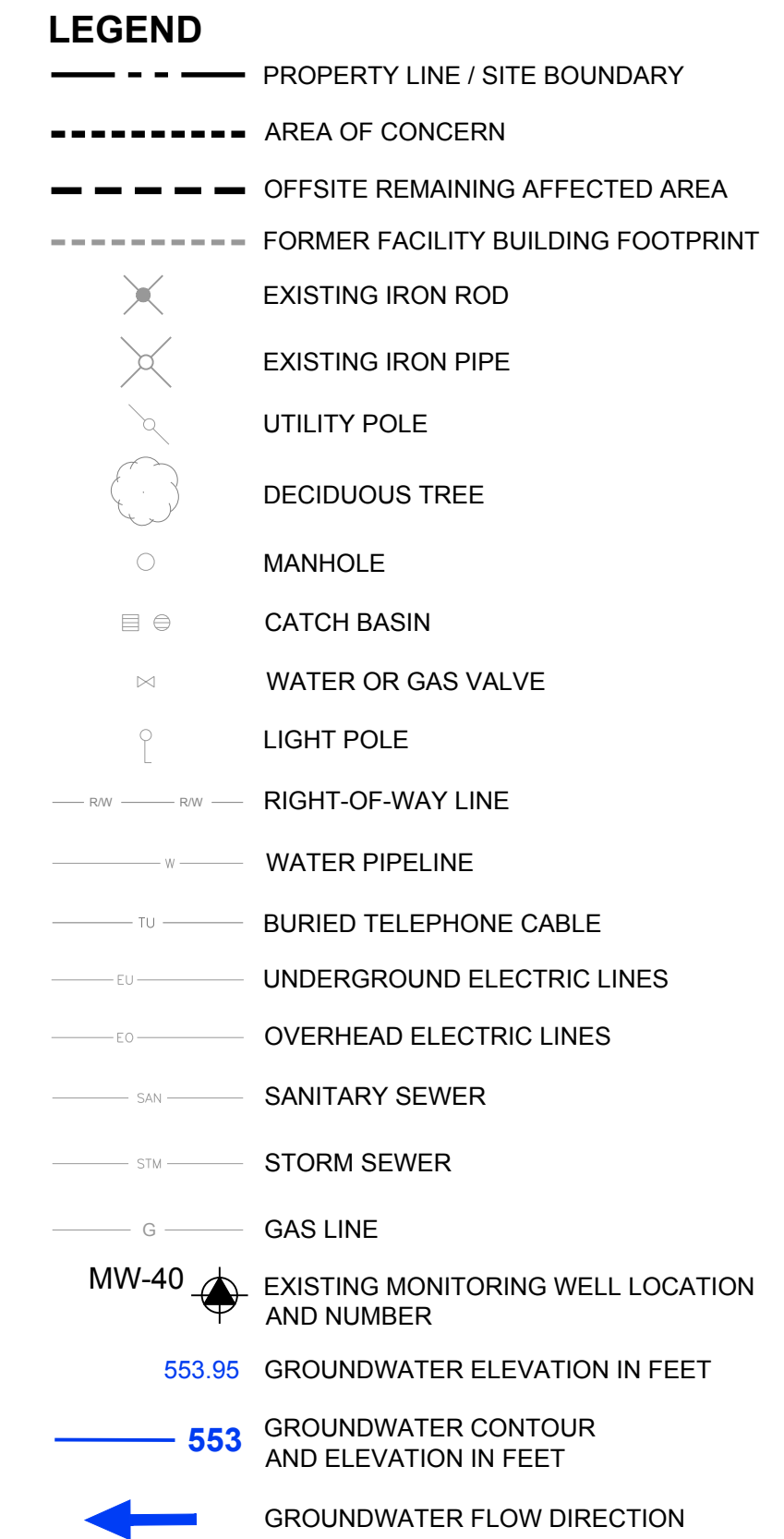
Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

SITE PLAN

FIGURE 2

Sheet: 02 of 10



1. BASE MAP PROVIDED BY HUNT ENGINEERS ARCHITECTS SURVEYORS, TAX PARCEL NO. 162.08-1-3, JOB NO. 5384-002, DRAWING NAME 5384-002.DWG, DATED AUGUST 23, 2012.
2. SOUTHERN PROPERTY BOUNDARY LINE PROVIDED BY McFARLAND JOHNSON, MARCH 2016.
3. GROUNDWATER LEVEL MEASUREMENTS COLLECTED ON JUNE 14, 2017.

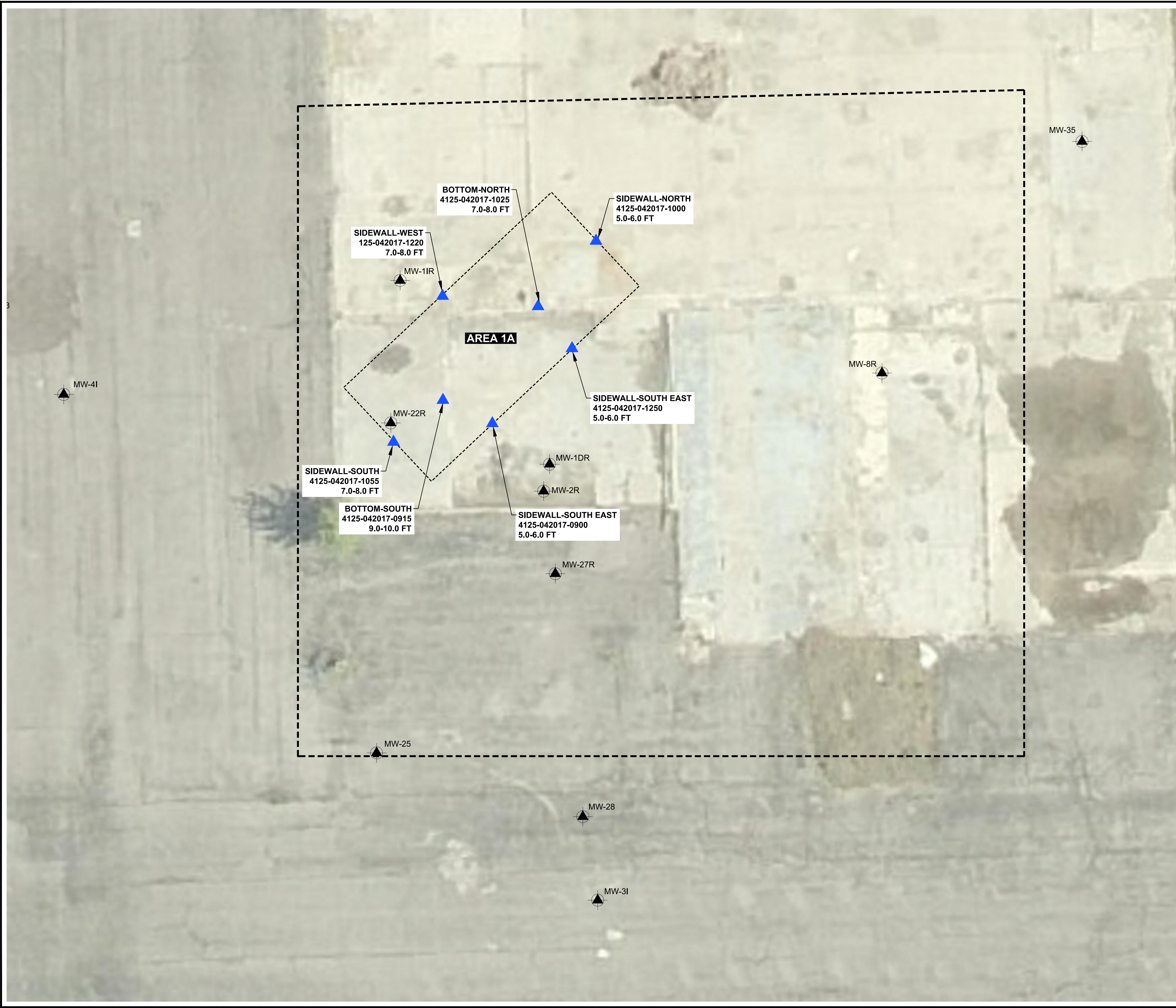
Project No.:	128437-010
Scale:	AS SHOWN
Date:	NOVEMBER 2017
Drawn By:	KV
Designed By:	KV
Checked By:	SM
Approved By:	SM
Stamp:	

Rev.	Description	By	Date

GROUNDWATER CONTOUR MAP

FIGURE 3

LUDDO, SAM Printed: 1/12/2017 6:08 PM Layout: FIGURE 4 811 JEFFERSON ROAD CAD\FIGURES\MP128437_009_FIG-4-5_EXCV_SAMP.DWG
HALEYALDRICH.COM\SHARE\ROC_COMMON\128437_811

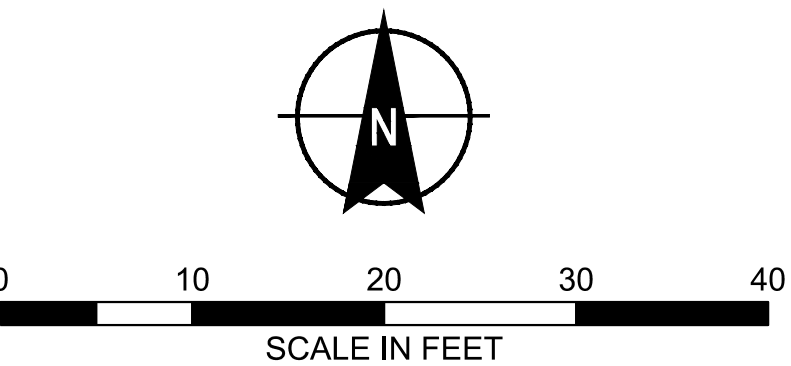


LEGEND

- LIMITS OF EXCAVATION
- AREA OF CONCERN
- MONITORING WELL LOCATION AND NUMBER
- CONFIRMATION/DOCUMENTATION SOIL SAMPLE LOCATIONS (SEE NOTE 2)

NOTES

1. ALL CONFIRMATION SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONFIRMATION SAMPLE LOCATION RESULTS MET THE PART 375 RESTRICTED COMMERCIAL USE CRITERIA.
3. SAMPLE DEPTHS ARE MEASURED IN FEET BELOW GROUND SURFACE.



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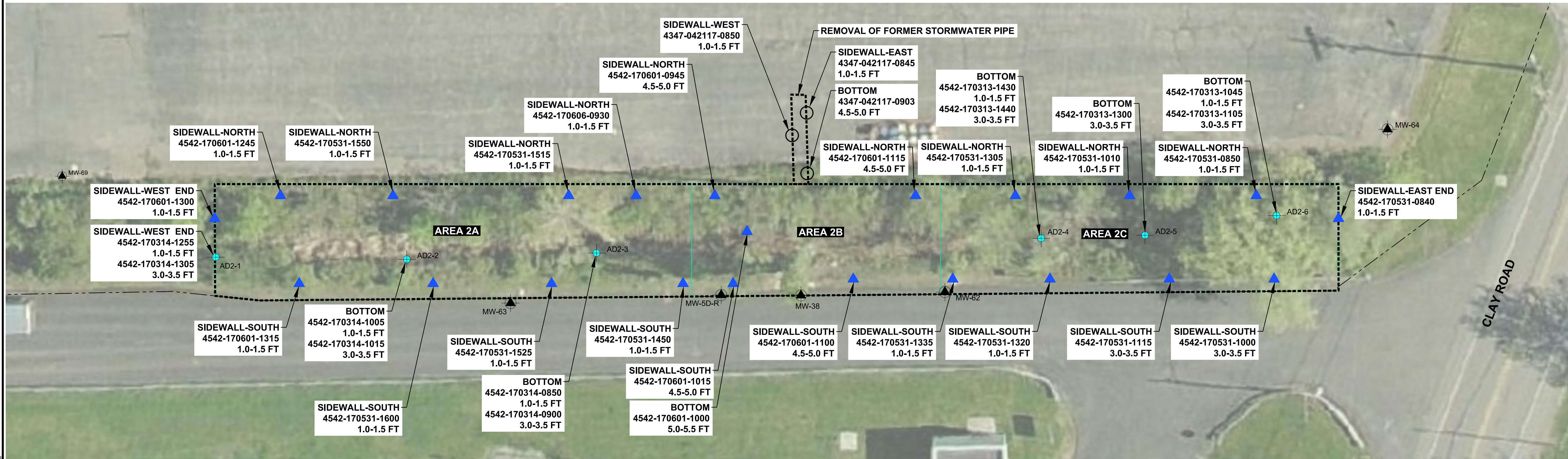
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Approved By:	SM
Stamp:	

Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

AREA 1A
EXCAVATION AND
CONFIRMATION
SAMPLE
LOCATIONS

FIGURE 4

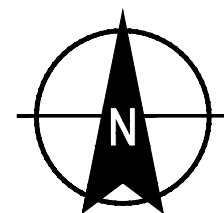


LEGEND

- PROPERTY LINE / SITE BOUNDARY
- APPROXIMATE EXCAVATION LIMITS
- MONITORING WELL LOCATION
- ▲ CONFIRMATION/DOCUMENTATION SOIL SAMPLE LOCATIONS (SEE NOTE 2)
- PRE-EXCAVATION GEOPROBE LOCATIONS
- STORMWATER CONFIRMATION / DOCUMENTATION SOIL SAMPLE LOCATIONS

NOTES

- ALL CONFIRMATION SAMPLE LOCATIONS ARE APPROXIMATE.
- ALL CONFIRMATION SAMPLE LOCATION RESULTS MET THE PART 375 RESTRICTED COMMERCIAL USE CRITERIA.
- SAMPLE DEPTHS ARE MEASURED IN FEET BELOW GROUND SURFACE.



0 15 30 45 60
SCALE IN FEET

Project No.: 128437-010
Scale: AS SHOWN
Date: NOVEMBER 2017
Drawn By: KV
Designed By: KV
Checked By: SM
Approved By: SM

Stamp:

Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

AREA 2
EXCAVATION AND
CONFIRMATION
SAMPLE
LOCATIONS

FIGURE 5

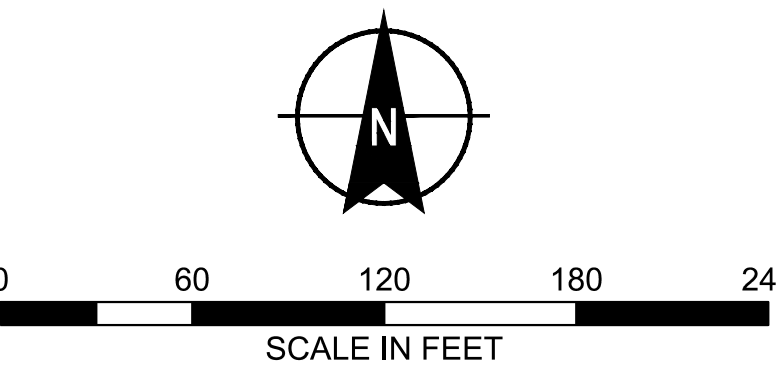
Sheet: 05 of 10

LUDDO, SAM
WHALEYALDRICH.COM\SHARE\ROC_COMMON\128437_811_JEFFERSON ROAD\CADD\FIGURES\MP128437_009_FIG-6_MW NETW.DWG
Printed: 11/20/2017 6:09 PM
Layout: FIGURE 6



- LEGEND**
- PROPERTY LINE / SITE BOUNDARY
 - AREA OF CONCERN
 - OFFSITE REMAINING AFFECTED AREA
 - FORMER FACILITY BUILDING FOOTPRINT
 - EDGE OF CONCRETE/PAVEMENT
 - EXISTING IRON ROD
 - EXISTING IRON PIPE
 - UTILITY POLE
 - DECIDUOUS TREE
 - MANHOLE
 - CATCH BASIN
 - WATER OR GAS VALVE
 - LIGHT POLE
 - RIGHT-OF-WAY LINE
 - WATER PIPELINE
 - BURIED TELEPHONE CABLE
 - UNDERGROUND ELECTRIC LINES
 - OVERHEAD ELECTRIC LINES
 - SANITARY SEWER
 - STORM SEWER
 - GAS LINE
 - EXISTING MONITORING WELL LOCATION
 - NETWORK MONITORING WELL LOCATION

- NOTES:**
- BASE MAP PROVIDED BY HUNT ENGINEERS ARCHITECTS SURVEYORS, TAX PARCEL NO. 162.08-1-3, JOB NO. 5384-002, DRAWING NAME 5384-002.DWG, DATED AUGUST 23, 2012.
 - SOUTHERN PROPERTY BOUNDARY LINE PROVIDED BY McFARLAND JOHNSON, MARCH 2016.



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Rochester, NY 14623-4264
Tel: 585.359.9000
Fax: 585.359.4650
www.haleyaldrich.com

Project No.: 128437-010
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Date: NOVEMBER 2017
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Designed By: KV
Checked By: SM
Approved By: SM
Stamp:

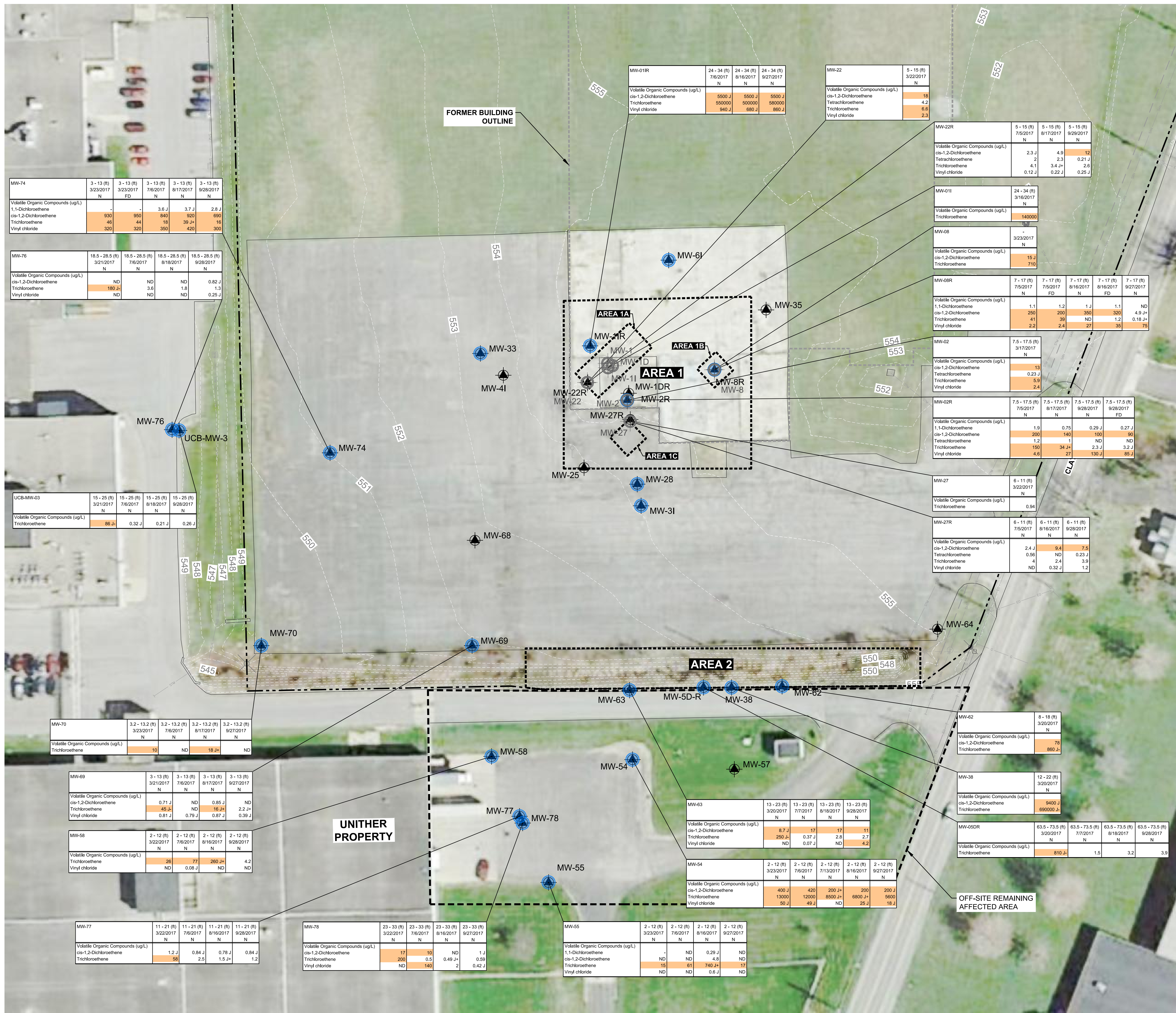
Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

MONITORING WELL
NETWORK

FIGURE 6

LUDDO, SAM
WHALEYALDRICH.COM\HAREDOC_COMMON\128437_811_JEFFERSON ROAD\CAD\FIGURES\MP128437_009_FIG-7_GW_DATABOX.DWG
Printed: 11/20/2017 6:09 PM Layout: FIGURE 7



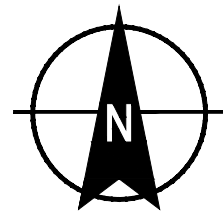
- LEGEND**
- PROPERTY LINE / SITE BOUNDARY
 - AREA OF CONCERN
 - OFFSITE REMAINING AFFECTED AREA
 - EXISTING MONITORING WELL LOCATION
 - NETWORK MONITORING WELL LOCATION
 - DECOMMISSIONED MONITORING WELL LOCATION

- NOTES**
- BASE MAP PROVIDED BY HUNT ENGINEERS ARCHITECTS SURVEYORS, TAX PARCEL NO. 162.08-1-3, JOB NO. 5384-002, DRAWING NAME 5384-002.DWG, DATED AUGUST 23, 2012.
 - SOUTHERN PROPERTY BOUNDARY LINE PROVIDED BY McFARLAND JOHNSON, MARCH 2016.
 - PARAMETERS SHOWN IN DATABOXES ARE THOSE THAT ARE DETECTED AT EACH SAMPLE LOCATION.
 - ND (#): NOT DETECTED ABOVE THE REPORTING LIMIT.
 - QUALIFIERS DEFINED AS FOLLOWS:
J: ESTIMATED RESULT
J+: ESTIMATED RESULT, BIASED HIGH
 - N: NORMAL; FD: FIELD DUPLICATE
 - UCB-MW-03 INSTALLED AS PART OF INVESTIGATIONS AT 755 JEFFERSON ROAD BY UCB OR ITS PREDECESSORS. CONSTRUCTION DETAILS ARE NOT KNOWN.

	NYSDEC TOGS Ambient Water Class GA (ug/L)
Volatile Organic Compounds	5
1,1-Dichloroethene	5
cis-1,2-Dichloroethene	5
Tetrachloroethene	5
Trichloroethene	5
Vinyl chloride	2

	WELL ID	SCREEN INTERVAL	SAMPLE DATE	SAMPLE TYPE
MW-58	2 - 12 (ft)	7/6/2017	N	
Volatile Organic Compounds (ug/L)				
Trichloroethene				77
Vinyl chloride				0.08 J

** DETECTED CONCENTRATIONS FROM GROUNDWATER SAMPLES WERE SCREENED AGAINST NYSDEC TOGS AMBIENT WATER CLASS GA. CONCENTRATIONS THAT EXCEED ARE HIGHLIGHTED ORANGE.



0 40 80 120 160
SCALE IN FEET

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Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

ON-SITE AND
OFF-SITE
GROUNDWATER
CONCENTRATIONS

FIGURE 7

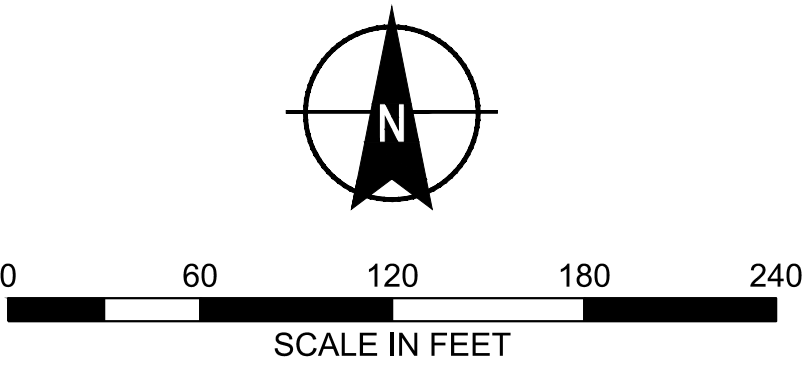
Sheet: 07 of 10

LUDDO, SAM Printed: 11/20/2017 6:09 PM Layout: FIGURE 8
HALEYALDRICH.COM\SHARE\ROC_COMMON\128437_811_JEFFERSON ROAD\FIGURES\MP128437_009_FIG-8_POT SOIL EXC.DWG



- LEGEND**
- PROPERTY LINE / SITE BOUNDARY
 - POTENTIAL SOIL EXCEEDANCE AREA
 - OFFSITE REMAINING AFFECTED AREA
 - FORMER FACILITY BUILDING FOOTPRINT
 - EDGE OF CONCRETE/PAVEMENT
 - EXISTING IRON ROD
 - EXISTING IRON PIPE
 - UTILITY POLE
 - DECIDUOUS TREE
 - MANHOLE
 - CATCH BASIN
 - WATER OR GAS VALVE
 - LIGHT POLE
 - RW RIGHT-OF-WAY LINE
 - W WATER PIPELINE
 - TU BURIED TELEPHONE CABLE
 - EU UNDERGROUND ELECTRIC LINES
 - EO OVERHEAD ELECTRIC LINES
 - SAN SANITARY SEWER
 - STM STORM SEWER
 - GAS LINE

- NOTES**
- BASE MAP PROVIDED BY HUNT ENGINEERS ARCHITECTS SURVEYORS, TAX PARCEL NO. 162.08-1-3, JOB NO. 5384-002, DRAWING NAME 5384-002.DWG, DATED AUGUST 23, 2012.
 - SOUTHERN PROPERTY BOUNDARY LINE PROVIDED BY McFARLAND JOHNSON, MARCH 2016.



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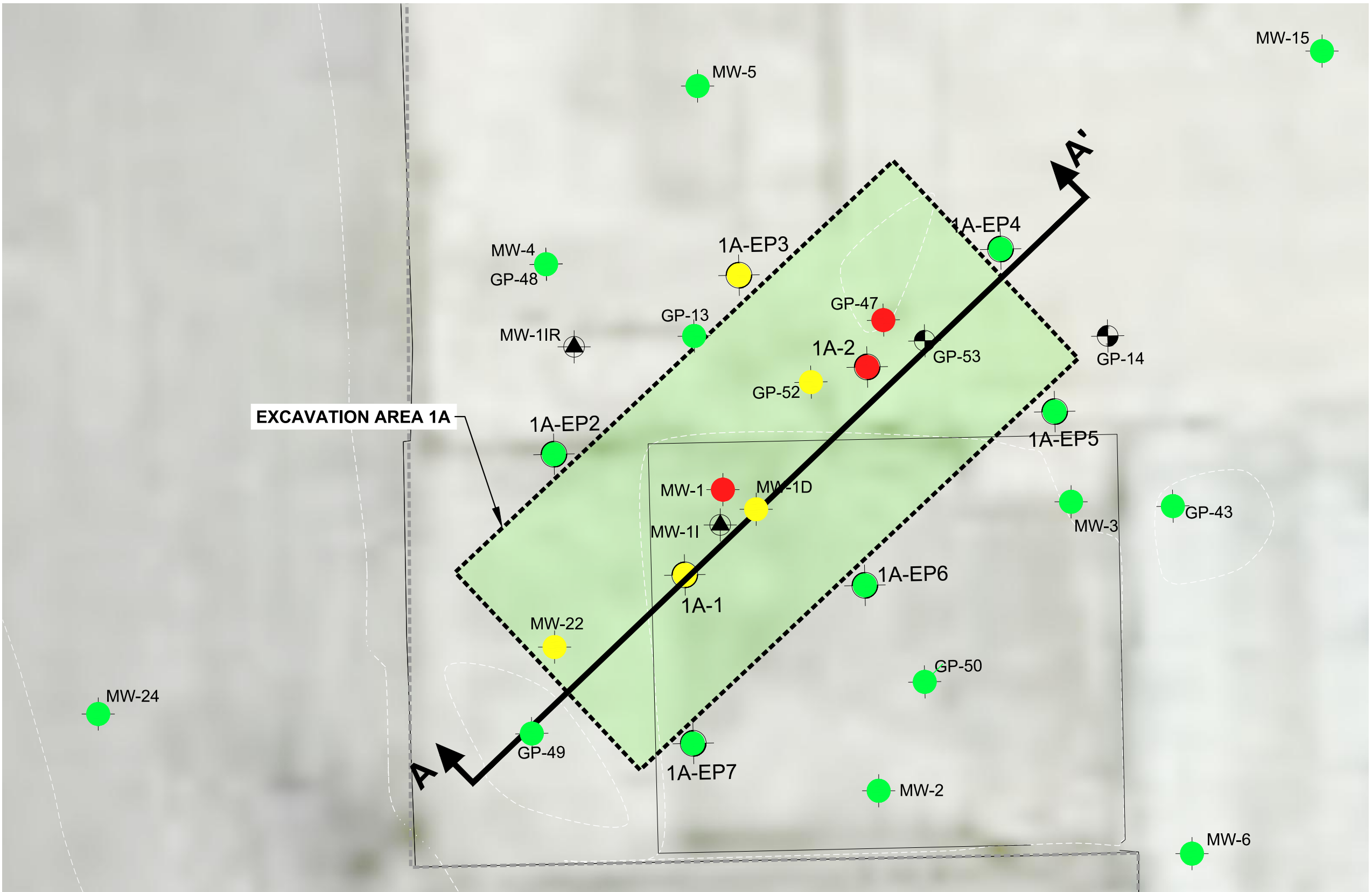
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FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

POTENTIAL SOIL
EXCEEDANCE
AREAS

FIGURE 8

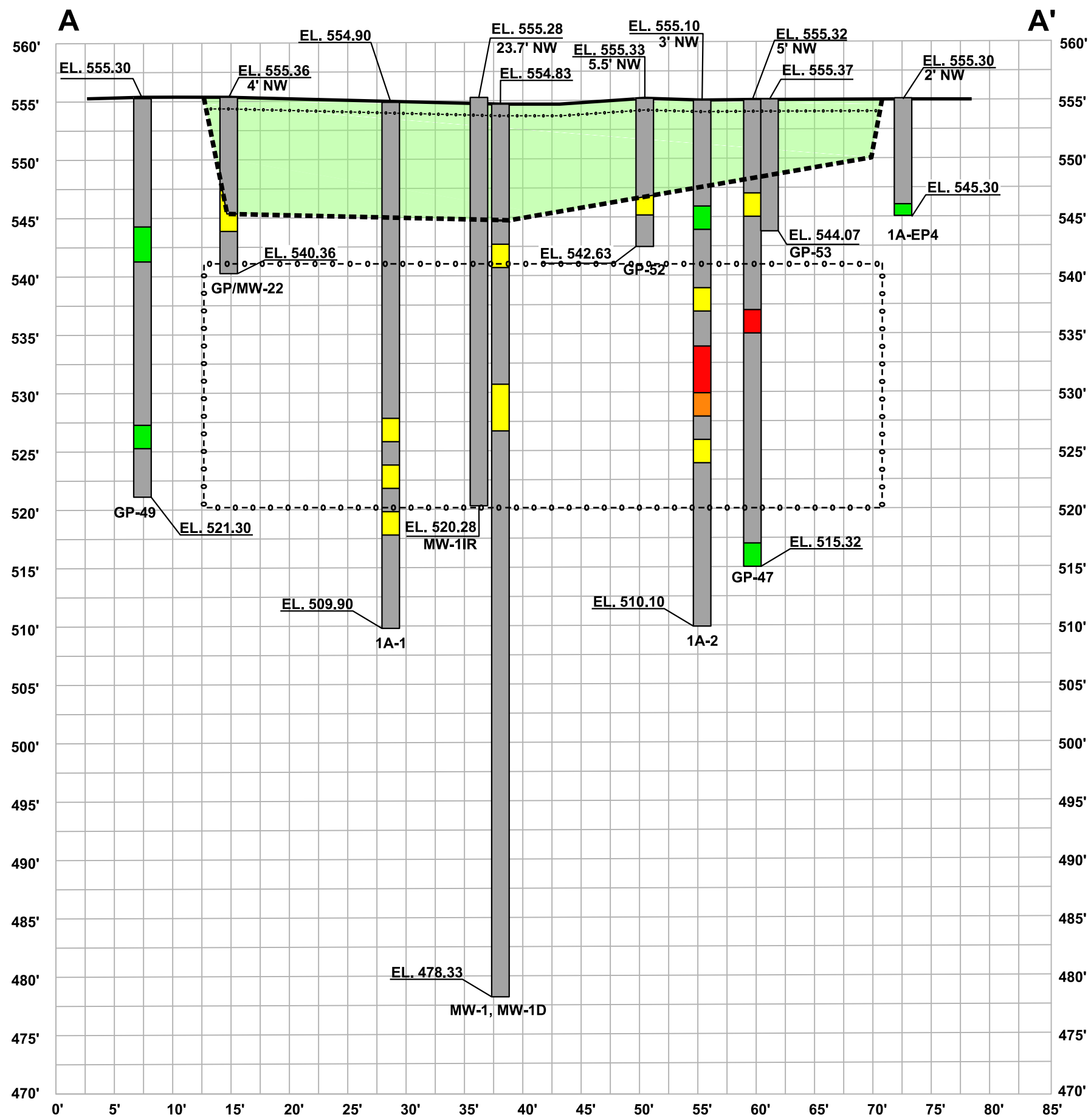
Sheet: 08 of 10

L:\0000_SAM\WHALEY\ALDRICH\COMMON\128437_811_JEFFERSON ROAD\CADD\FIGURES\MP128437_009_FIG-9-10_EXCAV.XSDWG
Printed: 11/20/2017 6:10 PM Layout: FIGURE 9
LUDDO, SAM
WHALEY\ALDRICH\COMMON\128437_811_JEFFERSON ROAD\CADD\FIGURES\MP128437_009_FIG-9-10_EXCAV.XSDWG

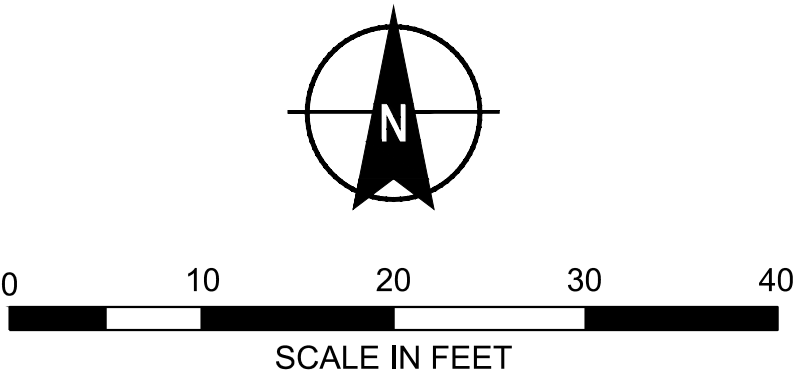


- LEGEND**
- ESTIMATED LIMITS OF EXCAVATION
 - - - - - DEMARCATION LAYER
 - - - - - TARGETED ISCR INJECTION ZONE
 - MW-28 MONITORING WELL LOCATION AND NUMBER
 - GP-45 GEOPROBE BORING LOCATION AND NUMBER
 - NO VOC CONCENTRATIONS > PART 375 PROTECTION OF GROUNDWATER CRITERIA
 - MAXIMUM VOC CONCENTRATIONS BETWEEN PART 375 PROTECTION OF GROUNDWATER CRITERIA AND PART 375 RESTRICTED COMMERCIAL USE CRITERIA
 - MAXIMUM VOC CONCENTRATIONS BETWEEN PART 375 RESTRICTED COMMERCIAL USE CRITERIA AND PART 375 RESTRICTED INDUSTRIAL USE CRITERIA
 - MAXIMUM VOC CONCENTRATIONS GREATER THAN PART 375 RESTRICTED INDUSTRIAL USE CRITERIA

- NOTES**
- SOIL SAMPLING LOCATIONS PROVIDED BY FINAL RI REPORT (STANTEC, 2009), REVISED SUPPLEMENTAL RI REPORT (STANTEC, 2010), AND PREDESIGN WORK (HALEY & ALDRICH, 2016).
 - ALL LOCATIONS ARE APPROXIMATE.
 - CONTAMINANT LEVELS PRESENTED BELOW THE EXCAVATION LIMITS WERE FROM THE REMEDIAL INVESTIGATION PRIOR TO REMEDIAL ACTION.
 - ISCR = IN-SITU CHEMICAL REDUCTION.
 - DEMARCATION LAYER CONSISTS OF ORANGE SAFETY BARRIER.



EXCAVATION CROSS SECTION A - A'
NTS



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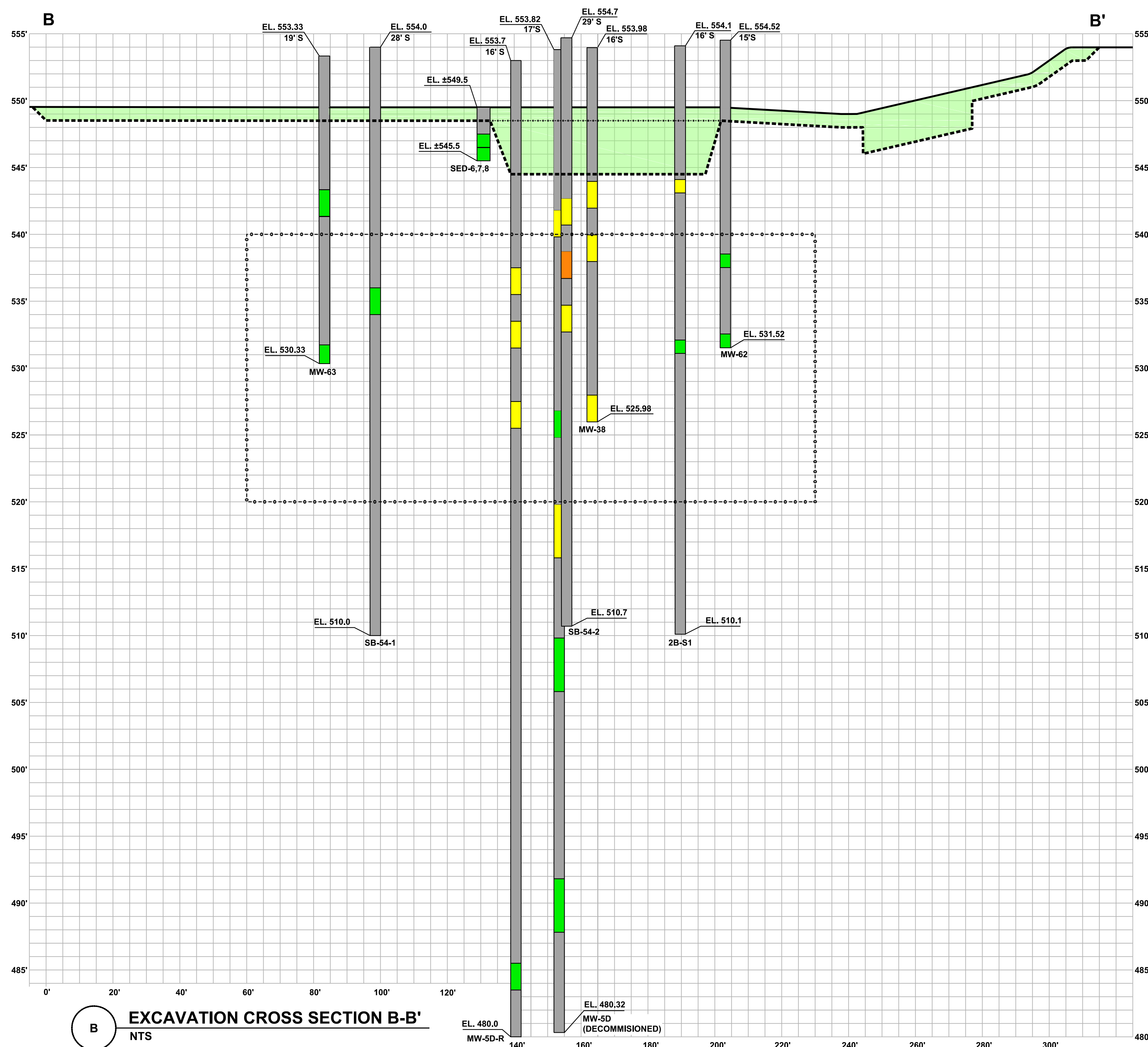
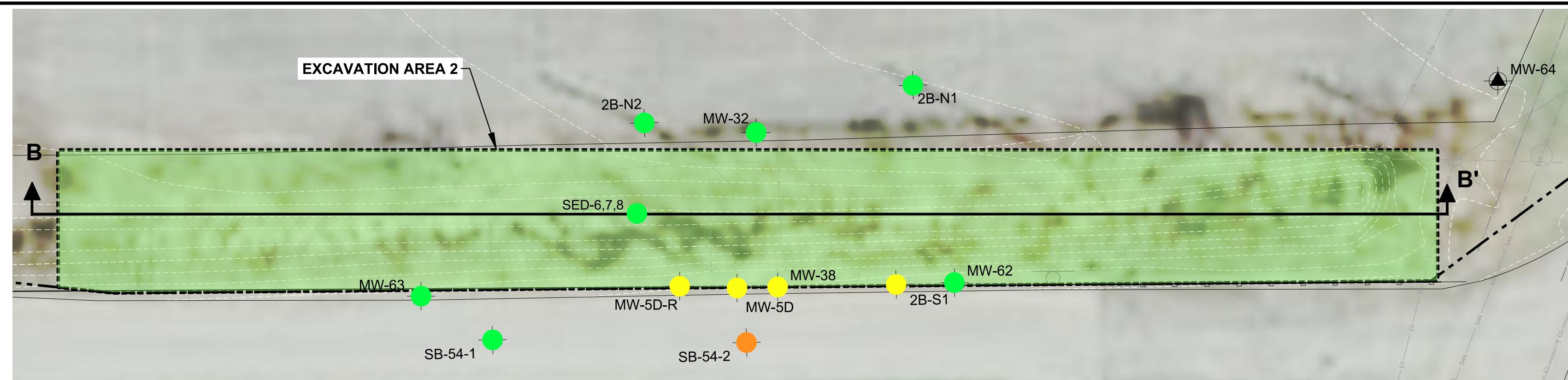
Rev.	Description	By	Date

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FACILITY SITE
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**AREA 1A
EXCAVATION
CROSS-SECTION**

FIGURE 9

Sheet: 09 of 10



LEGEND

	PROPERTY LINE (BROWNFIELD BOUNDARY)
	ESTIMATED LIMITS OF EXCAVATION
	DEMARICATION LAYER
	TARGETED ISCR INJECTION ZONE
MW-28 SED-6,7,8	 MONITORING WELL LOCATION AND NUMBER
	 SEDIMENT AND DRAINAGE DITCH SOIL SAMPLING LOCATION AND NUMBER
	 NO VOC CONCENTRATIONS > PART 375 PROTECTION OF GROUNDWATER CRITERIA
	 MAXIMUM VOC CONCENTRATIONS BETWEEN PART 375 PROTECTION OF GROUNDWATER CRITERIA AND PART 375 RESTRICTED COMMERCIAL USE CRITERIA
	 MAXIMUM VOC CONCENTRATIONS BETWEEN PART 375 RESTRICTED COMMERCIAL USE CRITERIA AND PART 375 RESTRICTED INDUSTRIAL USE CRITERIA
	 MAXIMUM VOC CONCENTRATIONS GREATER THAN PART 375 RESTRICTED INDUSTRIAL USE CRITERIA

NOTES

1. SOIL SAMPLING LOCATIONS PROVIDED BY FINAL RI REPORT (STANTEC, 2009), REVISED SUPPLEMENTAL RI REPORT (STANTEC, 2010), AND PREDESIGN WORK (HALEY & ALDRICH, 2016).
2. ALL LOCATIONS ARE APPROXIMATE.
3. CONTAMINANT LEVELS PRESENTED BELOW EXCAVATION LIMITS WERE FROM THE REMEDIAL INVESTIGATION PRIOR TO REMEDIAL ACTION.
4. ISCR = IN-SITU CHEMICAL REDUCTION.
5. DEMARCATION LAYER CONSISTS OF ORANGE SAFETY BARRIER.

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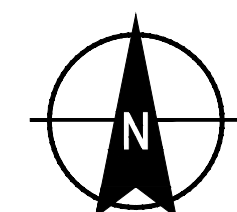
Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

AREA 2
EXCAVATION
CROSS-SECTION

FIGURE 10

Sheet: 10 of 10



0 20 40 60 80

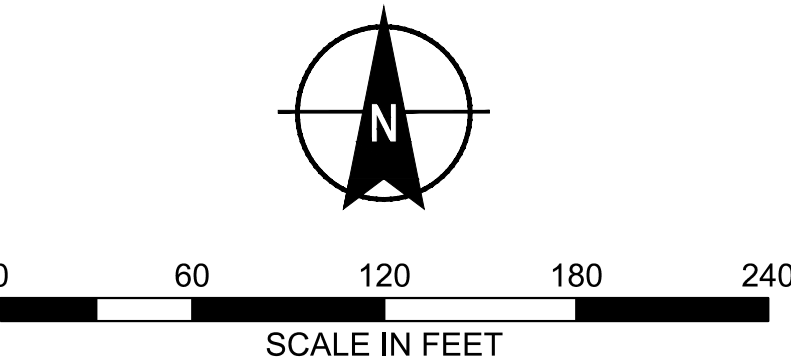
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LUDLO, SAM
WHALEYALDRICH.COM\SHARE\ROC_COMMON\128437_811_JEFFERSON ROAD\CADD\FIGURES\MP128437_009_FIG-11_COVER.DWG
Printed: 11/20/2017 6:11 PM
Layout: FIGURE 11



- LEGEND**
- PROPERTY LINE / SITE BOUNDARY
 - AREA OF CONCERN
 - EDGE OF CONCRETE/PAVEMENT
 - EXISTING IRON ROD
 - EXISTING IRON PIPE
 - UTILITY POLE
 - DECIDUOUS TREE
 - MANHOLE
 - CATCH BASIN
 - WATER OR GAS VALVE
 - LIGHT POLE
 - RIGHT-OF-WAY LINE
 - WATER PIPELINE
 - BURIED TELEPHONE CABLE
 - UNDERGROUND ELECTRIC LINES
 - OVERHEAD ELECTRIC LINES
 - SANITARY SEWER
 - STORM SEWER
 - GAS LINE

- NOTES:**
- BASE MAP PROVIDED BY HUNT ENGINEERS ARCHITECTS SURVEYORS, TAX PARCEL NO. 162.08-1-3, JOB NO. 5384-002, DRAWING NAME 5384-002.DWG, DATED AUGUST 23, 2012.
 - SOUTHERN PROPERTY BOUNDARY LINE PROVIDED BY McFARLAND JOHNSON, MARCH 2016.



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Rev.	Description	By	Date

FORMER AB DICK
FACILITY SITE
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

**SITE WIDE
EXISTING COVER
SYSTEM PLAN**

FIGURE 11

Sheet: 11 of 10

APPENDIX A

Environmental Easement and the Remedial and Site Management Access License

BARCLAY DAMON^{LLP}

Thomas F. Walsh
Partner

October 24, 2017

**SENT VIA CERTIFIED MAIL –
RETURN RECEIPT REQUESTED**

Jack W. Moore, Supervisor
Town of Henrietta
Henrietta Town Hall
PO Box 999
Henrietta, NY 14467

Re: Former A.B. Dick Facility Site – Environmental Easement
811 Jefferson Road,
Town of Henrietta,
Monroe County, New York
BCP Site Number: C828148
BCP Index Number: B8-0745-07-06
Tax Map ID No.: 162.09-1-3

Dear Supervisor Moore:

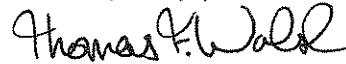
We represent 811 Jefferson Road, LLC with respect to environmental matters involving its property located at 811 Jefferson Road in the Town of Henrietta, County of Monroe, New York, with the tax map identification number 162.09-1-3.

811 Jefferson Road, LLC executed on September 25, 2017 an environmental easement in the favor of the New York State Department of Environmental Conservation (“NYSDEC”) with respect to the 811 Jefferson Road property. We recorded that environmental easement at the Monroe County Clerk’s Office on October 18, 2017.

Pursuant to the terms of the easement, we are also required to officially notify the local municipality of the existence of the easement and its recording. In that regard, enclosed please find the formal notice that the NYSDEC requires to be sent to the Town of Henrietta that the easement has been executed and recorded in the County of Monroe. Also enclosed is a time-stamped copy of the environmental easement for your ease of reference and the files of the Town of Henrietta.

Should you or your legal counsel have any questions, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink that reads "Thomas F. Walsh". The signature is written in a cursive style with a large, stylized "W" and "H".

Thomas F. Walsh

Enclosures

cc: (with enclosures via email)
Danielle Miles, NYSDEC
Frank Sowers, NYSDEC
Andrew Guglielmi, Esq., NYSDEC
Mark Sergott, NYSDOH
Sandy Rueckwald, Co-Trustee
James F. Lieb, CNB, Co-Trustee
Marshall Hardy, McFarland-Johnson
Lucien A. Morin II, Esq., MCC&M, P.C.
Glen White, Haley and Aldrich
Chief, Site Control Section, NYSDEC

cc (pursuant to Section XII.A.1 of BSC Agreement; via letter w/out enclosure):
Bart Putzig, NYSDEC
Gary Litwin, NYSDOH
Maura C. Desmond, NYSDEC

NOTICE OF ENVIRONMENTAL EASEMENT

The New York State Department of Environmental Conservation (the "Grantee"), has been granted an Environmental Easement pursuant to Article 71, Section 36 affecting real property located at the following address:

811 Jefferson Road, in the Town of Henrietta,
County of Monroe and State of New York

Property Owner/Grantor: 811 Jefferson Road, LLC

The Tax Map Identification No.: 162.09-1-3

NYS Department of Environmental Conservation Site No.: C828148

The Environmental Easement for the above referenced property was filed in the Monroe County Clerk's Office on **October 18, 2017** at Liber 11935, Page 13 of Deeds.

The Environmental Easement contains institutional and/or engineering controls that run with the land. The Environmental Easement may restrict the use of the above referenced property to "Restricted Commercial Use" and/or "Restricted Industrial Use."

NOTICE IS HEREBY GIVEN that any activity on the land which might or will prevent or interfere with the ongoing or completed remedial program, including the controls as set forth in the Environmental Easement and the Site Management Plan, must be done in accordance with the Site Management Plan which is incorporated by reference into the Environmental Easement. A copy of the Site Management Plan can be obtained by contacting the Department at Site Control Section, Division of Environmental Remediation, NYSDEC, 625 Broadway, Albany, New York 12233, Phone: (518) 402-9553 or derweb@gw.dec.state.ny.us. Be further advised of the notice provisions of NYCRR 375-1.11(d) relative to contemplated significant changes in use.

Failure to Comply with the terms and conditions of the Environmental Easement may subject violators to penalties of up to \$37,500 per day for violation of 6 NYCRR 375-1.11(b).

An electronic version of the applicable environmental easement has been accepted by the New York State Department of Environmental Conservation and is available to the public at: <http://www.dec.ny.gov/chemical/36045.html>.

MONROE COUNTY CLERK'S OFFICE
ROCHESTER, NY

THIS IS NOT A BILL. THIS IS YOUR RECEIPT

Return To:
BOX 14 1/2

811 JEFFERSON ROAD LLC

PEOPLE OF THE STATE OF NEW YORK
COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION

Receipt # 1683556
Index DEEDS
Book 11935 Page 13
No. Pages : 12
Instrument EASEMENT AGREEMENT
Date : 10/18/2017
Time : 11:31:36AM
Control # 201710180314
TT # TT0000005003
Ref 1 #
Employee : EmilyD

COUNTY FEE TP584	\$	5.00
COUNTY FEE NUMBER PAGES	\$	55.00
RECORDING FEE	\$	45.00
STATE FEE TRANSFER TAX	\$	0.00

Total \$ 105.00

State of New York

MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS
ENDORSEMENT, REQUIRED BY SECTION 317-a(5) &
SECTION 319 OF THE REAL PROPERTY LAW OF THE
STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

ADAM J BELLO

MONROE COUNTY CLERK



FI182-201710180314-12

TRANSFER AMT

TRANSFER AMT \$1.00

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

Box 14 1/2 TW

THIS INDENTURE made this 25th day of September, 2017, between Owner(s) 811 Jefferson Road, LLC, having an office at 1150 Pittsford Victor Road, Pittsford, New York, County of Monroe, State of New York (the "Grantor"), 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, is the owner of real property located at the address of 811 Jefferson Road in the Town of Henrietta, County of Monroe and State of New York, known and designated on the tax map of the County Clerk of Monroe as tax map parcel numbers: Section 162.09 Block 1 Lot 3 (#162.09-1-3), which was conveyed to Grantor by: (i) deed dated July 28, 2000 and recorded on August 21, 2000 in the Monroe County Clerk's Office in Liber 9352 and Page 161; (ii) deed dated July 28, 2000 and recorded on August 21, 2000 in the Monroe County Clerk's Office in Liber 9352 and Page 165; (iii) deed dated June 30, 2005 and recorded on July 6, 2005 in the Monroe County Clerk's Office in Liber 10150 and Page 262; (iv) deed dated June 16, 2005 and recorded on July 6, 2005 in the Monroe County Clerk's Office in Liber 10150 and Page 265; (v) deed dated June 30, 2005 and recorded on July 6, 2005 in the Monroe County Clerk's Office in Liber 10150 and Page 268; (vi) deed dated June 30, 2005 and recorded on July 6, 2005 in the Monroe County Clerk's Office in Liber 10150 and Page 271; and (vii) deed dated

September 30, 2016, and recorded with the Monroe County Clerk's Office in Liber 11770 of Deeds, Page 112 on October 19, 2016. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 12.213 +/- acres, and is hereinafter more fully described in the Land Title Survey dated July 14, 2016, and last revised, January 23, 2017, prepared by Ravi Engineering and Land Surveying, P.C., and which will also 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: B8-0745-07-06 as amended January 7, 2017, 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:

"Commercial Use" as defined in 6 NYCRR Part 375-1.8(g)(2)(iii) and/or
"Industrial Use" as defined 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 Controlled Property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe 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 Controlled 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 "Unrestricted Use" as defined in 6 NYCRR Part 375-1.8(g)(1)(i), "Residential Use" as defined in 6 NYCRR Part 375-1.8(g)(2)(i) and/or "Restricted-Residential Use" as defined in 6 NYCRR Part 375-1.8(g)(2)(ii), 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: Monroe County; NYSDEC Site Number: C828148; Brownfield Cleanup Agreement Index : B8-0745-07-06; and Monroe County tax map number 162.09-1-3.

Parties shall address correspondence to: Site Number: C828148
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; Signature Page Follows]

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

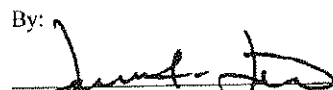
811 JEFFERSON ROAD, LLC
By its Members:

The Trust for the benefit of Eric Rueckwald under
Agreement dated December 23, 1976 with Raymond P. Hylan

By: 
Sandra L. Rueckwald as Co-Trustee for
the benefit of Eric Rueckwald under
Agreement dated December 23, 1976 with
Raymond P. Hylan

and

By The Canandaigua National Bank and Trust
Company, as Co-Trustee for the benefit of
Eric Rueckwald under Agreement dated
December 23, 1976 with Raymond P. Hylan

By: 
James Lieb, Sr., Vice President

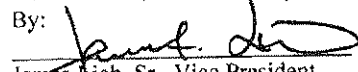
And

The Trust for the benefit of Mark Rueckwald under
Agreement dated December 23, 1976 with Raymond P. Hylan

By: 
Sandra L. Rueckwald as Co-Trustee for
the benefit of Mark Rueckwald under
Agreement dated December 23, 1976 with
Raymond P. Hylan

and

By The Canandaigua National Bank and Trust
Company, as Co-Trustee for the benefit of
Mark Rueckwald under Agreement dated
December 23, 1976 with Raymond P. Hylan

By: 
James Lieb, Sr., Vice President

Grantor's Acknowledgment

STATE OF NEW YORK)

) ss:

COUNTY OF MONROE)

On the 26th day of August, in the year 2017, before me, the undersigned, personally appeared Sandra L. Rueckwald, 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

Laura Beth Henderson

LAURA BETH HENDERSON
Notary Public, State of New York
Monroe County Reg. #01HE6253038
Commission Expires 12/18/2017

Grantor's Acknowledgment

STATE OF NEW YORK)

) ss:

COUNTY OF MONROE)

On the 28th day of August, in the year 2017, before me, the undersigned, personally appeared James Lieb, Sr., 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

Laura Beth Henderson

LAURA BETH HENDERSON
Notary Public, State of New York
Monroe County Reg. #01HE6253038
Commission Expires 12/18/2019

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 25th day of September, in the year 2017, 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"
AS MEASURED PROPERTY DESCRIPTION
FROM THE INSTRUMENT SURVEY ISSUED JULY 14, 2016 PREPARED BY
RAVI ENGINEERING AND LAND SURVEYING PC
BEING AND INTENDING TO DESCRIBE THE SAME PROPERTY AS FILED IN
MONROE COUNTY CLERK'S OFFICE AT LIBER 9352, PAGE 165 AND AT
LIBER 11770, PAGE 112

ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Henrietta, County of Monroe, State of New York and is more particularly described as follows:

Commencing at the intersection formed by the southerly right-of-way line of Jefferson Road, New York State Route 252, and the westerly right-of-way of Clay Road. Thence S89°46'05" W along said southerly right-of-way a distance of 102.39 feet to a point, thence S88°44'10" W a distance of 80.50 feet, thence S01°15'25" E a distance of 6.62 feet to the point and place of beginning thence,

- S 01°15'25" E for a distance of 234.41 feet to a point thence,
- N 88°44'35" E, a distance of 173.24 feet to a point in the westerly right-of-way of Clay Road thence,
- S 21°04'35" W along the westerly right-of-way of Clay Road, a distance of 589.20 feet to a point thence,
- S 53°25'02" W, a distance of 51.37 feet to a point thence,
- S 89°29'00" W, a distance of 297.77 feet to a point thence,
- N 84°05'03" W, a distance of 24.36 feet to a point thence,
- S 88°56'41" W, a distance of 208.19 feet to a point thence,
- N 01°15'25" W, a distance of 800.03 feet to a point in the southerly right-of-way line of Jefferson Road thence,
- N 88°44'10" E, along the southerly right-of-way line of Jefferson Road, a distance of 604.86 feet to a point thence,
- N 84°16'38" E continuing along aforesaid right-of-way, a distance of 17.86 feet to the point and place of beginning.

Intending to describe a parcel of land being 12.213 acres, 811 Jefferson Road, Town of Henrietta.

MONROE COUNTY CLERK'S OFFICE
ROCHESTER, NY

THIS IS NOT A BILL. THIS IS YOUR RECEIPT

Return To:
BOX 14 1/2

UNITHER MANUFACTURING LLC
811 JEFFERSON ROAD LLC

UNITHER MANUFACTURING LLC
811 JEFFERSON ROAD LLC

Receipt # 1555774
Index DEEDS
Book 11825 Page 60
No. Pages : 22
Instrument LICENSE AGREEMENT
Date : 02/23/2017
Time : 04:09:57PM
Control # 201702230705
TT # TT0000011901
Ref 1 #
Employee : CJTa

COUNTY FEE TP584	\$	5.00
COUNTY FEE NUMBER PAGES	\$	105.00
RECORDING FEE	\$	45.00
STATE FEE TRANSFER TAX	\$	0.00

Total \$ 155.00

State of New York

MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS
ENDORSEMENT, REQUIRED BY SECTION 317-a(5) &
SECTION 319 OF THE REAL PROPERTY LAW OF THE
STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

TRANSFER AMT

TRANSFER AMT \$1.00

ADAM J BELLO

MONROE COUNTY CLERK



PI182-201702230705-22

REMEDIAL AND SITE MANAGEMENT ACCESS LICENSE

Box 1412

THIS REMEDIAL AND SITE MANAGEMENT ACCESS LICENSE (hereinafter, "Long Term Access License") is made and entered as of May 4, 2016 (the "Effective Date"), by and between UNITHER MANUFACTURING, LLC, a Delaware Limited Liability Company, (the "Licensor"), UCB Technologies, Inc. ("UCB"), and 811 JEFFERSON ROAD, LLC, a New York Limited Liability Company (the "Licensee"), collectively all three parties are referred to as the "Parties").

WHEREAS, Licensor owns certain real property located at 755 Jefferson Road in the Town of Henrietta, Monroe County, New York (the "Unither Property"), which is subject to a lease/leaseback arrangement between Licensor and the Monroe County Industrial Development Agency;

WHEREAS, UCB, pursuant to that certain Asset Purchase Agreement dated May 24, 2013 ("APA"), sold the Unither Property to Licensor;

WHEREAS, Licensee and the New York State Department of Environmental Conservation (the "Department") entered into a Brownfield Site Cleanup Agreement, Index No. B80745-07-06, dated October 5, 2007, as amended, (the "BSC Agreement") for Licensee's adjoining property located at 811 Jefferson Road, Town of Henrietta, Monroe County, New York (the "Site");

WHEREAS, pursuant to the BSC Agreement, Licensee investigated the nature and extent of the contamination on, in, at, beneath and emanating from the Site, including to the extent it may have migrated onto the Unither Property;

WHEREAS, it appears that contamination from the Site may be impacting a portion of the Unither Property bounded on the west by the eastern face of Unither Building 3, on the north by the common boundary line between the Site and the Unither Property, on the east by Clay Road, and on the south by a line one hundred and ninety feet (190') to the south of and paralleling the current common boundary line, as illustrated on the Figure attached hereto and incorporated herein as Exhibit 'A' ("Affected Area");

WHEREAS, contemporaneously with this Long Term Access License, Licensee and Licensor have entered into a purchase and sale agreement whereby Licensee will purchase a 22.5'-29.5' wide strip of land on the north side of Licensor's eastern driveway (the "Strip") as illustrated on the Figure attached hereto and incorporated herein as Exhibit 'B,' such that the remaining Affected Area on the Unither Property will comprise one and a half acres more or less after Licensee's purchase of the Strip (the "Remaining Affected Area");

WHEREAS, after the purchase of the Strip by Licensee, a lot line adjustment will be employed by Licensee to remove the Strip from the Unither Property and expand the Site by adding the Strip to the Site (the "Expanded Site");

WHEREAS, once the Remedial Action Work Plan and the Decision Document (collectively the "**Remedial Planning Documents**") have been approved by the Department, the BSC Agreement will obligate Licensee to undertake certain remedial program activities on the Expanded Site and certain off-site remedial program activities in the Remaining Affected Area on the Unither Property;

WHEREAS, the cleanup goal for the Expanded Site under the BSC Agreement is to achieve conditions protective of public health and the environment for the Site's commercial redevelopment;

WHEREAS, Licensor and UCB have requested, and Licensee has agreed to request, that the cleanup goal for the Remaining Affected Area on the Unither Property under the Remedial Planning Documents be to achieve to the extent feasible conditions protective of public health and the environment for its unrestricted use, including without limitation the Department's Unrestricted Soil Cleanup Objectives found at 6 NYCRR 375-6.8(a);

WHEREAS, the Remedial Planning Documents are currently in draft form and subject to further development and negotiation by the Department and Licensee;

WHEREAS, the Parties have agreed to promptly and diligently negotiate mutually acceptable revisions to the draft Remedial Planning Documents based upon the above-referenced cleanup goals for the Expanded Site and the Remaining Affected Area on the Unither Property, which mutually acceptable revised draft Remedial Planning Documents will be submitted by Licensee to the Department for comment and/or approval;

WHEREAS, upon their approval by the Department, Licensee will be obligated to implement on the Expanded Site and the Remaining Affected Area the remedial program activities described in the Remedial Planning Documents ("**Remedy**");

WHEREAS, Licensor and Licensee concur that, as a precautionary measure, the fiber optic cable that serves the Licensor's facility should be relocated prior to the implementation of the Remedy and at Licensee's sole cost and expense from its present location on or immediately south of the Site's present southern boundary line and north of ditch running parallel to that boundary line in the Strip to a new location on the south side of Licensor's entrance drive in from Clay Road ("**Fiber Optic Line Relocation**"), as illustrated on the Figure attached hereto and incorporated herein as Exhibit 'C';

WHEREAS, upon implementation of the Remedy to the Department's satisfaction, Licensee will have to prepare to the satisfaction of the Department a comprehensive Site Management Plan for the Expanded Site and the Remaining Affected Area, including without limitation an Excavation Management Plan, a Soil Vapor Intrusion Management Plan, an In-situ Chemical Reduction Monitoring Plan for the engineering control to be implemented on and/or adjacent to the Remaining Affected Area, including further applications of the chemical reduction amendment to groundwater and/or additional corrective measures if required by the Department, and a Groundwater Quality Monitoring Plan (collectively, an "**SMP**") in order to ensure that conditions at the Expanded Site remain protective of its commercial use and

conditions at the Remaining Affected Area remain protective of its unrestricted use to the extent feasible;

WHEREAS, Licensee has agreed to promptly and diligently prepare a proposed SMP for the Site, and the Parties have agreed to promptly and diligently negotiate mutually acceptable terms for the proposed SMP as it applies to the Remaining Affected Area, which proposed SMP will then be submitted by Licensee to the Department for comment and/or approval;

WHEREAS, it appears that contamination from the Site may also be present in the area of the Unither Property along the vegetated strip between the western boundary line of the Site and Licensor's driveway and eastern parking, including where groundwater quality monitoring wells UCB MW-3 and MW-76 are located, as illustrated on the Figure attached hereto and incorporated herein as Exhibit 'A';

WHEREAS, UCB and Licensor have requested and Licensee has agreed to propose to the Department that, as part of the Groundwater Quality Monitoring Plan set forth in the SMP, MW-76, MW-54, UCB-MW-3, MW-70, MW-69, MW-58, MW-77, MW-78, and MW-55 be among the wells periodically sampled and analyzed for volatile organic compounds ("VOCs");

WHEREAS, upon its approval by the Department, Licensee will be obligated to implement the SMP both on the Expanded Site, in the Remaining Affected Area and at MW-76, and UCB-MW-3 including without limitation the preparation and submission of any periodic review reports required by the Department ("PRR");

WHEREAS, UCB and Licensor have asked Licensee to perform the Fiber Optic Line Relocation, Remedy, SMP and PRR ("**Remedial Work**") at Licensee's sole cost and expense, and Licensee has agreed to do so subject to the terms of this Long Term Access License and in accordance with the BSC Agreement;

WHEREAS, to complete the Remedial Work, Licensee must obtain Licensor's permission to enter the Remaining Affected Area for the purpose of performing the Remedial Work, including without limitation implementation of the SMP's Groundwater Quality Monitoring Plan, and enter the Unither Property to sample UCB-MW-3 and MW-76;

WHEREAS, to implement the Fiber Optic Line Relocation, Licensee must obtain Licensor's permission to enter the Unither Property;

WHEREAS, Licensee is required by the BSC Agreement to report all Remedial Work activities and data generated to the Department, and Licensee has agreed to promptly provide to Licensor and UCB a copy of all non-privileged data, plans and reports which the Department allows to be shared with Licensor and UCB prior to it becoming generally available to the public and to promptly provide to Licensor and UCB a copy of all publicly available data, plans and reports prepared by Licensee related to the Remedial Work; and

WHEREAS, Licensee's implementation of the Remedial Work may be overseen by the Department, and may be observed by an environmental consultant on behalf of Licensor and UCB.

NOW THEREFORE, for good and valuable consideration, and in consideration of the mutual covenants and conditions in this Long Term Access License, and with the intent to be legally bound, the Parties agree as follows:

1. Simultaneously with the Closing for the purchase of the Strip, Licensee shall pay Licensor the sum of Twenty Five Thousand Dollars (\$25,000) as compensation for the access being granted to Licensee pursuant to this Long Term Access License. As additional consideration, Licensee hereby waives any setback rights with respect to, and covenants not to oppose, any plan or proposal by Licensor to expand the parking on the northeast side of Licensor's facility adjoining the western boundary line of the Site, as illustrated on the Figure attached hereto and incorporated herein as Exhibit 'A', and Licensee shall promptly and diligently at Licensee's sole cost and expense implement the Fiber Optic Line Relocation on the Unither Property, as illustrated on the Figure attached hereto and incorporated herein as Exhibit 'C'. During any and all access to the Unither Property, including the Remaining Affected Area, Licensee and its representatives and agents shall comply with all reasonable Licensor policies and procedures related to health, safety, security and the environment.
2. The Parties shall promptly, diligently and in good faith negotiate revisions to the draft Remedial Planning Documents based upon the cleanup goal for the Expanded Site under the BSC Agreement which is to achieve conditions protective of public health and the environment for the Expanded Site's commercial redevelopment, as well as a requested cleanup goal for the Remaining Affected Area that would achieve to the extent feasible conditions protective of public health and the environment for the Remaining Affected Area's unrestricted use. Once mutually acceptable revised draft Remedial Planning Documents for the Remaining Affected Area have been prepared based upon the above-referenced cleanup goals, Licensee shall submit them to the Department for comment and/or approval. If need be, the Parties shall promptly, diligently and in good faith negotiate the proposed response to any comments of the Department on the revisions to the draft Remedial Planning Documents impacting the Remaining Affected Area, and Licensee shall submit such response to comments and, if any, such further revised draft Remedial Planning Documents to the Department for comment and/or approval. Upon the Department's approval of the Remedial Planning Documents, Licensee shall promptly and diligently implement the Remedy both on the Expanded Site and in the Remaining Affected Area at Licensee's sole cost and expense.
3. Upon completion of the implementation of the Remedy to the satisfaction of the Department, the Parties shall promptly, diligently and in good faith negotiate the terms of a draft SMP for the Expanded Site and the Remaining Affected Area. Once a mutually acceptable draft SMP for the Remaining Affected Area has been prepared, Licensee shall submit it to the Department for comment and/or approval. If need be, the Parties shall promptly, diligently and in good faith negotiate the proposed response to any comments of the Department on the draft SMP, and Licensee shall submit such response to comments and, if any, such further revised draft SMP to the Department for comment and/or approval. Upon the Department's approval of the SMP, Licensee shall promptly and diligently implement the SMP on the Expanded Site, in the Remaining Affected Area and at UCB-MW-3 and MW-76, at Licensee's sole cost and expense, including without limitation the preparation and submission of any PRR required by the Department.

4. Licensors hereby grants, remises, and relinquishes to Licensee, the Department and New York State Department of Health ("NYSDOH"), and their employees, agents, representatives, successors, assigns, contractors, and subcontractors, the right, privilege, authority and easement to enter upon, use, travel over, access and occupy the Remaining Affected Area solely for those activities related to the implementation of the Remedial Work and to the Unither Property solely for the sampling of UCB-MW-3 and MW-76 and Fiber Optic Line Relocation. Licensee shall record with the Monroe County Clerk this Long Term Access License with respect to the Expanded Site and the Unither Property.

5. Licensee's initial entry onto the Unither Property shall be upon prior written notice to Licensors and UCB, as provided in Section 20, delivered at least five (5) business days prior thereto. The access notification shall include the proposed time(s) and date(s) of such entry and a description of the activity(ies) to be implemented.

6. Licensee shall promptly provide Licensors and UCB with copies of any non-privileged reports, plans or data generated as a result of any Remedial Work carried out in connection with this Long Term Access License, including without limitation any non-privileged plans and/or reports prepared and submitted to the Department pursuant to the BSC Agreement, which the Department allows to be shared with Licensors and UCB prior to it becoming generally available to the public, and to promptly provide to Licensors and UCB a copy of all publicly available data, plans and reports prepared by Licensee related to the Remedial Work. Licensee shall, upon request and to the extent feasible, make available to Licensors and UCB split samples of all substances and materials sampled by Licensee at the Unither Property. Once any split samples are made available to Licensors and UCB, such split samples shall be the sole and exclusive responsibility of Licensors or UCB, including, but not limited to, any transport, analysis or other disposition, and the costs, of such samples, for any of which costs each of Licensors and UCB releases and covenants not to sue Licensee. Each of UCB, Licensors and Licensee further agrees that it will not, except as required by law or the BSC Agreement, provide or discuss the foregoing information with any unrelated third party or entity, other than the Department, NYSDOH, Licensee, Licensors and UCB and their employees, agents, representatives, successors, assigns, contractors, and subcontractors, unless it receives prior written permission to do so from the other Parties, such permission not to be unreasonably withheld, conditioned or delayed.

7. Licensors and UCB and their environmental consultant(s) shall have the right to observe activities conducted by Licensee at the Unither Property to implement the Remedial Work, and/or participate along with Licensee in communications and negotiations with the Department about the Unither Property, at the cost and expense of the entity exercising this right. Licensee, Licensors and UCB shall cooperate and consult in good faith, including without limitation Licensee keeping Licensors and UCB apprised of the status and results of such activities, and Licensors and UCB shall minimize to the extent reasonably practicable the costs and expenses incurred by Licensee arising out of or relating to the implementation of the Remedial Work.

8. During the implementation of the Remedial Work, Licensee shall not interfere with the operations and business of the Licensors on the Unither Property, including without limitation, avoiding circumstances that would disrupt, either, delivery and shipments to and from

the Unither Property's loading dock, employee access to and from the Unither Property, or any utility access corridors or conduits, and in the event Licensor informs Licensee that its right of access is interfering with Licensor's operations and business, all work activity shall stop immediately pending a resolution by the parties; provided, however, that, if Licensor approves of the location of an activity implementing the Remedial Work such activity shall not be an interference with the operations and business of the Licensor on the Unither Property. Licensee shall coordinate with Licensor a schedule for performing the Remedial Work at least five days prior to commencing activities on the Remaining Affected Area or the Fiber Optic Line Relocation or the sampling of UCB-MW-3 or MW-76 on the Unither Property, and Licensor shall not unreasonably withhold, condition or delay such schedule. Licensee's activities to implement the Remedial Work in the Remaining Affected Area shall only occur, either, between the hours of 3:00 PM and 7:00 AM on weekdays, Monday through Friday, or anytime over the weekend, Saturday and Sunday, and any schedule for performing the Remedial Work shall adhere to such acceptable time periods. In addition, Licensee shall comply with all of Licensor's security access guidelines for entering the Unither Property that Licensor provides to Licensee in writing at least two days prior to the scheduled commencement of the Remedial Work in the Remaining Affected Area, including without limitation, registration with on-site security personnel and maintaining on-site credentials. In the event that Licensee encounters any unexpected conditions in the performance of Remedial Work in the Remaining Affected Area, Licensee shall immediately stop all work and notify Licensor consistent with the notice provisions contained in Section 20 below. Licensor and Licensee shall promptly confer regarding the unexpected conditions, and unless within forty-eight (48) hours of such conference, Licensor notifies Licensee in writing that continued performance of Remedial Work will interfere with its operations, the safety of persons at the Unither Property or exacerbate an existing environmental condition or create a new adverse environmental impact, Licensee may recommence performance of the Remedial Work.

9. The implementation of the Remedial Work in the Remaining Affected Area, and the sampling of UCB-MW-3 and MW-76 and implementation of the Fiber Optic Line Relocation on the Unither Property, shall be performed at the entire cost and expense of Licensee, in accordance with good and sound engineering practices and in a manner to avoid accident, damage or harm to person or property, and in accord with all applicable laws and regulations for the performance of the Remedial Work activities. With respect to any waste material that is generated on the Unither Property during the implementation of the Remedial Work, Licensee shall promptly move such waste material onto the Expanded Site (i.e., Licensee's adjoining property located at 811 Jefferson Road) for storage or handling if it is not directly loaded and sent off-site for disposal or treatment upon generation; and Licensee shall sign the solid waste or hazardous waste manifest(s) for such waste materials as generator.

10. In the event that the groundwater monitoring wells installed on the Unither Property prior to the implementation of the Remedy cannot be adequately sampled as required by the SMP and/or PRR, including without limitation due to well failure or because they cannot be located, Licensee shall be required to replace said well(s) at Licensee's sole cost and expense, in accordance with good engineering practices and in a manner to avoid accident, damage or harm to person or property, or interference with Licensor's business. Licensor and UCB shall not allow their respective officers, members, agents, servants, employees, contractors, subcontractors, invitees or licensees to disturb, interfere or remove UCB-MW-3, MW-76, MW-

54, MW-58, MW-77, MW-78, MW-55, or any other well, device or equipment, or engineering controls that Licensee installs or samples as part of the Remedial Work which remains within the Remaining Affected Area after Licensee and/or its employees, agents, representatives, successors, assigns, contractors, and subcontractors have departed.

11. Licensee agrees to indemnify and hold harmless Licensor and UCB, and their employees, agents, representatives, successors and assigns, from and against any and all claims, losses, damages, injuries, liabilities, penalties, forfeiture, suits, and the costs and expenses incident thereto (including without limitation the cost of necessary response actions, investigations, remedial measures, defense, settlement, and attorneys', consultant's, or other professional fees), which Licensor, UCB and/or their employees, agents, representatives, successors, assigns may hereafter suffer or incur ("**Indemnified Losses**") as a result of death or bodily injury to any person, destruction or damage to any real or personal, property, and the loss or interference with any use or service thereof, contamination of or adverse effect on the environment, or any violation of governmental laws, rules, regulations, or orders caused by: (i) any contamination released or discharged at the Expanded Site prior to the effective date of this Long Term Access License and migrating onto the Unither Property, (ii) Licensee or its employees, agents, representatives, successors, assigns, contractors, and subcontractors in performance of the Remedial Work activities at the Unither Property, (iii) any breach by Licensee or its representatives of any term of this Long Term Access License, or (iv) any negligent, intentional, or willful act or omission of Licensee or one of its employees, agents, representatives, successors, assigns, contractors, and subcontractors in the performance of the Remedial Work activities at the Unither Property; except to the extent that any negligent, willful or intentional act or omission of Licensor, UCB or one of their employees, agents, representatives, successors, assigns, contractors, and subcontractors contribute to an Indemnified Loss, in which case Licensee's indemnification obligation shall be reduced by the extent that the act or omission of Licensor, UCB or one of their employees, agents, representative, successor, assigns, contractors, and subcontractors contributed to the Indemnified Loss.

12. Licensor and/or UCB shall notify Licensee of any actual legal notice of any claim, loss, damage, injury, liability, penalty, forfeiture, suit, and the costs and expenses incident thereto arising from or related to the Remedial Work activities performed at the Unither Property consistent with the notice provisions contained in Section 20 below.

13. Any contract or subcontract, as the case may be, for the performance of the Remedial Work activities on the Unither Property shall be conditioned upon the contractor's or the subcontractor's, as the case may be, having liability insurance of at least \$1,000,000 for each occurrence and \$2,000,000 in the aggregate. Licensor and UCB shall each be named an additional insured party on such liability insurance policies.

14. Licensee shall assume full responsibility to assure that the Remedial Work activities conducted at the Unither Property shall not disrupt any utility or service and the liability for any such disruption shall be on Licensee pursuant to Section 11. Licensor and UCB shall describe to Licensee the actual location of any buried utility or service at the Unither Property that may be adversely affected by the implementation of the Remedial Work of which Licensor and/or UCB have actual knowledge. In the conduct of its operations and completion of

the Remedial Work pursuant to this Long Term Access License, Licensee agrees to obtain all necessary permits and to comply with all applicable laws.

15. The incremental cost and expense of installing, testing, monitoring, operating and maintaining any soil vapor intrusion systems and/or barriers for any building constructed or existing in the Remaining Affected Area in accordance with the SMP's Soil Vapor Intrusion Management Plan and as required by the Department shall be at Licensee's cost and expense.

16. Licensee agrees that, after every entrance upon the Unither Property (and completion of the Remedial Work activities relevant to the Unither Property or any portion thereof), it shall make the necessary repairs so that the Unither Property and its grounds are replaced, repaired, and returned to their original condition in which Licensee found them to the maximum extent reasonably practicable, unless Licensor informs Licensee in writing that Licensor desires or permits such to remain as is. Upon completion of each work-day associated with Licensee's performance of the Remedial Work activities relevant to the Unither Property, all equipment used, all soil and groundwater samples (with the exception of split samples made available to Licensor and/or UCB as provided in Section 6, above), any waste soils or materials, and any other materials collected, excavated, or generated during the activities shall be immediately removed from the Unither Property by Licensee; provided, however, that Licensee's site security measures for any open boreholes or excavations created during the implementation of the Remedial Work may be left in place on the Unither Property until completed and that any groundwater monitoring or injection wells installed as part of the Remedial Work may remain in place on the Unither Property until such time as the Department and Licensor approve their abandonment.

17. Licensor may at any time request that Licensee or its successor and assign seek, in which case Licensee or its successor and assign shall seek, from the Department a written confirmation that no further Remedial Work, including without limitation no further action under the SMP, is required at the Unither Property. Licensor may in its sole discretion join with Licensee in such request to the Department. This Long Term Access License shall expire upon receipt of written confirmation from the Department that no further Remedial Work, including without limitation no further action under the SMP and PRR, is required at the Unither Property. Termination of the BSC Agreement with respect to the Site shall relieve Licensee of its obligations under this Long Term Access License except for its obligation to pay compensation to Licensor under Section 1 of this Long Term Access License; provided, however, that Licensee shall not leave the Remaining Affected Area in a condition worse than that which prevailed before any activities were commenced by Licensee under this Long Term Access License, which obligation shall survive the expiration of this Long Term Access License. In the event that Licensee is relieved of its obligations under this Long Term Access License except for its obligation to pay compensation to Licensor under Section 1 because either the BSC Agreement terminated with respect to the Site before the Remaining Affected Area is remediated as necessary to achieve to the extent feasible conditions protective of unrestricted use to the satisfaction of the Department, then the Parties acknowledge and agree that each reserves all of its legal rights, remedies and defenses, and that execution of this Long Term Access License shall not preclude any party from exercising its legal or equitable rights, remedies or defenses, or constitute a waiver of those rights, remedies or defenses, including without limitation that:

(i) Licensor and UCB each reserves all of its rights and claims against Licensee with respect to

the contamination on the Expanded Site or emanating from the Expanded Site and migrating onto the Unither Property, (ii) Licensee reserves all of its rights and defenses under applicable law with respect to any assertion of liability against Licensee, and (iii) the Parties each reserve all rights and defenses with respect to enforcement of this Long Term Access License, including the rights to notice, to be heard, to appeal and to any other due process.

18. This Long Term Access License is binding on the Parties' successors and assigns, and any transfer of ownership of any or all of the Remaining Affected Area, or any lease of any or all of the Remaining Affected Area, including without limitation a sublease, shall require compliance with the terms of this Long Term Access License by the party taking such ownership interest, and an affirmative written commitment by such party to allow entry by and to cooperate with the Licensee for the purpose of conducting the Remedial Work activities.

19. This Long Term Access License sets forth the entire agreement between the Parties with respect to the Unither Property and the Remaining Affected Area, superseding all prior agreements and understandings, written or oral, if any, and may not be altered, waived, amended or modified, except in a writing signed by the Parties' authorized representatives. Notwithstanding anything herein to the contrary, the covenants of this Long Term Access License shall not extend to or in any way cover substances, wastes or materials first released, discharged, placed or coming to be present on the Unither Property after the Effective Date of this Long Term Access License except to the extent such substances, wastes or materials were released, discharged, placed or came to be present on the Unither Property by act or omission of Licensee or its employees, agents, representatives, successors, assigns, contractors, and subcontractors.

20. All notices, requests, and other communications pursuant to this Long Term Access License shall be in writing and sent by, either, electronic-mail or posted letter, addressed as follows:

For Licensors:

Robert R. Tyson, Esq.
Bond Schoeneck & King PLLC
One Lincoln Center,
110 West Fayette Street
Syracuse, New York 13202-1355
rtyson@bsk.com

Jessica Wojick
Unither Manufacturing LLC
755 Jefferson Road
Rochester, New York 14625
Jessica.Wojick@unither-pharma.com

For UCB:

David R. Emch
UCB, Inc.
1950 Lake Park Drive
Smyrna, Georgia 30080
David.emch@ucb.com

Leslie M. Mauro, Esq.
Harter, Secrest & Emery LLP
1600 Bausch and Lomb Place
Rochester, New York 14604
Lmauro@hselaw.com

For Licensee:

Lucien A. Morin II, Esq.
McConville Considine Cooman & Morin, PC
25 East Main Street, Suite 500
Rochester, New York 14614
lmorin@mccmlaw.com

Marshall Hardy
McFarland-Johnson Engineers, Inc.
2525 State Road 332, Box 6
Canandaigua, New York 14424-7500
MHardy@mjincc.com

Thomas F. Walsh, Esq.
Barclay Damon LLP
2000 HSBC Plaza
100 Chestnut Street
Rochester, New York 14604
twalsh@barclaydamon.com

21. This Long Term Access License, its validity, construction, and all rights hereunder shall be governed by the laws of the State of New York.

22. Except as otherwise provided herein, nothing herein is to be deemed a waiver or release of any claims whatsoever that the Parties may have against each other, including, but not limited to, those which may arise under this Long Term Access License. It is agreed that, by entering into this Long Term Access License, none of the Parties are admitting any liability, fault, wrongdoing, violation, or breach of a standard of care, nor agreeing to perform any investigation or remediation of environmental conditions at or on the Unither Property except as is specifically set forth in this Long Term Access License. Furthermore, the existence of this Long Term Access License or Licensee's compliance with the terms and conditions of this Long Term Access License shall not give rise to any presumption of law or finding of fact, create any rights, or grant any cause of action which shall inure to the benefit of any third-party.

23. This Long Term Access License may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Long Term Access License.

IN WITNESS HEREOF, this Agreement has been executed as of the day and year first above written.

UNITHER MANUFACTURING, LLC

By: Kevin Hachl 4 May 2016

Name: Kevin Hachl

Title: General Manager

811 JEFFERSON ROAD, LLC

By: _____

Name: _____

Title: _____

UCB TECHNOLOGIES, INC.

By: _____

Name: _____

Title: _____

23. This Long Term Access License may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Long Term Access License.

IN WITNESS HEREOF, this Agreement has been executed as of the day and year first above written.

UNITHER MANUFACTURING, LLC

By: _____

Name: _____

Title: _____

811 JEFFERSON ROAD, LLC

By: Sandra L. Rueckwald, Co-Trustee

Name: R.P. Hylan 1976 Trusts FBO Sandra L. Rueckwald
MARK RUECKWALD & ERIC RUECKWALD Co-Trustee

Title: Co-TRUSTEE

UCB TECHNOLOGIES, INC.

By: _____

Name: _____

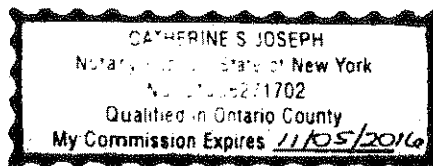
Title: _____

STATE OF NEW YORK
COUNTY OF MONROE ss.:

On this 4TH day of MAY, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared KEVIN LAEHL of Unither Manufacturing, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Catherine S Joseph

Notary Public



STATE OF GEORGIA
COUNTY OF COBB ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of UCB Technologies, Inc., personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF NEW YORK
COUNTY OF ONTARIO ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of 811 Jefferson Road, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF NEW YORK
COUNTY OF MONROE ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of Unither Manufacturing, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF GEORGIA
COUNTY OF COBB ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of UCB Technologies, Inc., personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF NEW YORK *Monroe*
COUNTY OF ~~ONTARIO~~ *Monroe* ss.:

On this 27th day of April, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared Sandra L. Rueckwald of 811 Jefferson Road, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Laura Beth Henderson
Notary Public

LAURA BETH HENDERSON
Notary Public, State of New York
Monroe County Reg. #01HE6253038
Commission Expires 12/19/2019

23. This Long Term Access License may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Long Term Access License.

IN WITNESS HEREOF, this Agreement has been executed as of the day and year first above written.

UNITHER MANUFACTURING, LLC

By: _____

Name: _____

Title: _____

811 JEFFERSON ROAD, LLC

By: RP Hylan 1976 Trusts FBO
Mark Rueckwald + Eric Rueckwald

Name: Cayandigua Nat'l Bank + Trust
as Co-Trustee, Mark Buonaugurio SVP

Title: Co-trustee, SVP

UCB TECHNOLOGIES, INC.

By: _____

Name: _____

Title: _____

STATE OF NEW YORK
COUNTY OF MONROE ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of Unither Manufacturing, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF GEORGIA
COUNTY OF COBB ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of UCB Technologies, Inc., personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF NEW YORK *Monroe*
COUNTY OF ~~ONTARIO~~ ss.:

On this 27th day of April, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared Mark Buomaguino of 811 Jefferson Road, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Laura Beth Henderson
Notary Public

LAURA BETH HENDERSON
Notary Public, State of New York
Monroe County Reg. #01HE6253038
Commission Expires 12/19/2019

23. This Long Term Access License may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Long Term Access License.

IN WITNESS HEREOF, this Agreement has been executed as of the day and year first above written.

UNITHER MANUFACTURING, LLC

By: _____

Name: _____

Title: _____

811 JEFFERSON ROAD, LLC

By: _____

Name: _____

Title: _____

UCB TECHNOLOGIES, INC

By: _____

Name: Denelle Gaynick

Title: VP Legal Affairs (Americas)

TECHNOLOGICAL
UNIVERSITY
UNIVERSITY
UNIVERSITY
UNIVERSITY
UNIVERSITY

STATE OF NEW YORK
COUNTY OF MONROE ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of Unither Manufacturing, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

STATE OF Georgia
COUNTY OF Cobb ss.:

On this 24th day of may, 2016 before me, the undersigned, a Notary Public in and for said State; personally appeared Dorell C. Wynn of UCB Technologies, Inc., personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Lasonia Herbert

Notary Public, _____

LASONIA HERBERT
NOTARY PUBLIC
Cobb County, Georgia
My Comm. Expires 02/10/2019

STATE OF NEW YORK
COUNTY OF ONTARIO ss.:

On this ____ day of _____, 2016 before me, the undersigned, a Notary Public in and for said State, personally appeared _____ of 811 Jefferson Road, LLC, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

Exhibit 'A'

**Figure of Affected Area of Unither Property Prior to the Strip of Land being Purchased by
Licensee from Licensor and of Licensor's Possible East Side Parking Lot Expansion
Marked on Haley & Aldrich Inc.; Drwg. C-101A
(As Revised July 28, 2015)**

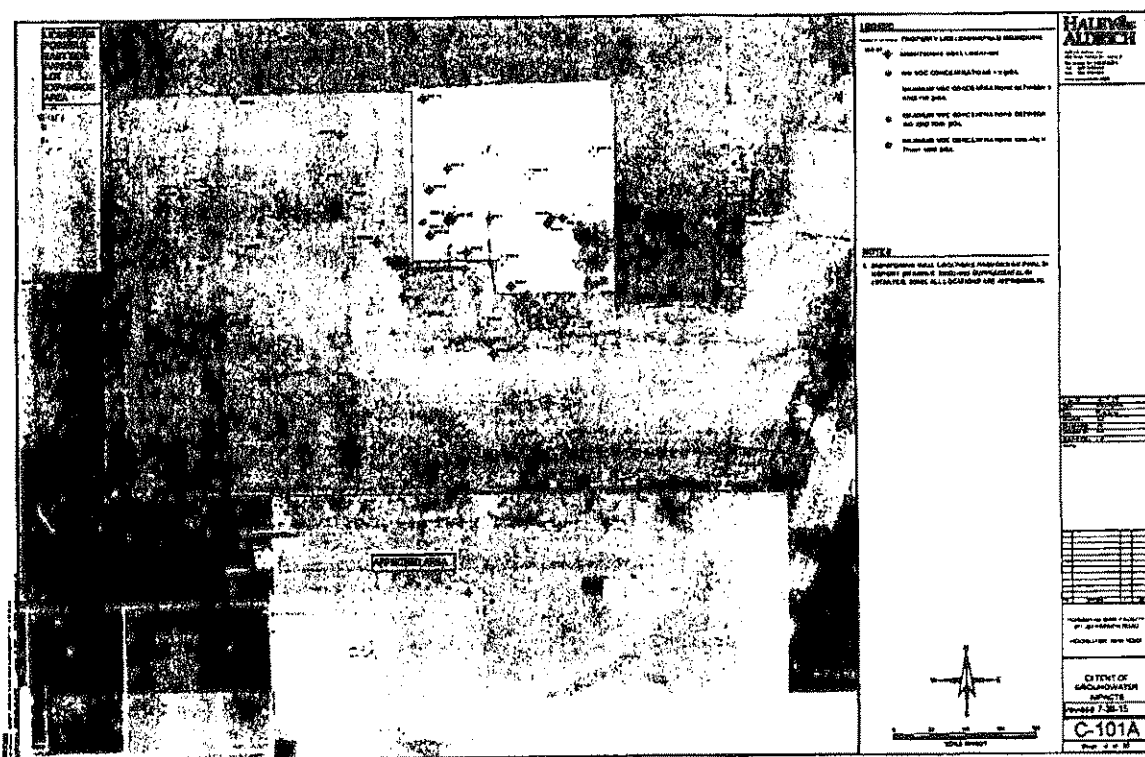


Exhibit 'B'

Figure of the Strip of Land being Purchased by Licensee from Licensor
Prepared by
McFarland Johnson dated as of May 8, 2015

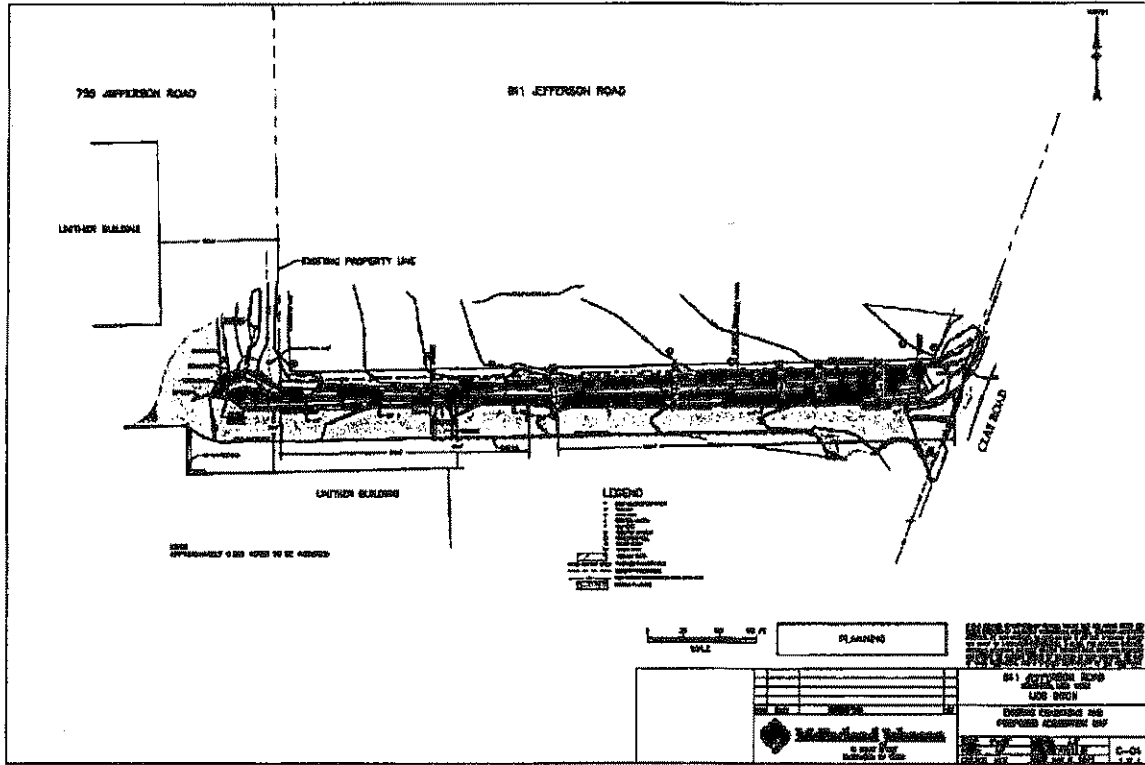
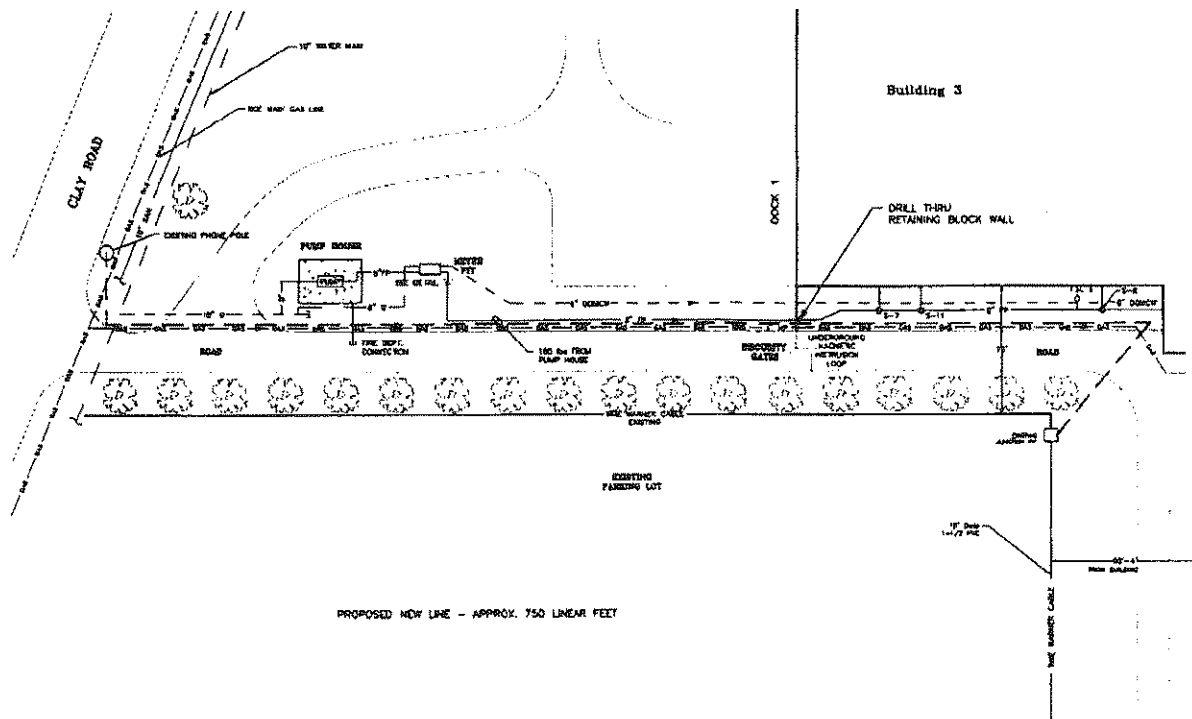


Exhibit 'C'

Figure for Relocation of the "Time Warner Cable Underground Line"
"Re-Routing of line from Clay Road, south side of Roadway"
Prepared by Licensor dated June 3, 2015



Unither Manufacturing, LLC
755 Jefferson Road
Rochester, New York 14623

Time Warner Cable Underground Line
Re-routing of line from Clay Road
South side of Roadway

APPENDIX B

List of Site Contacts

APPENDIX B – LIST OF SITE CONTACTS

Name	Phone/Email Address
Jim Lieb, Remedial Party Contact, Site Owner Contact	585.419.0670 jlieb@cnbank.com
Glenn White, Haley & Aldrich of New York, Qualified Environmental Professional	585.321.4239 gwhite@haleyaldrich.com
Danielle Miles, NYSDEC DER Project Manager	585.226.5349 danielle.miles@dec.ny.gov
Jessica Wojick, Off-site Access Contact/Unither Manufacturing	585.274.5430 Jessica.wojick@unither-pharma.com
Tom Walsh, Remedial Party Attorney	585.295.4414 twalsh@barclaydamon.com

APPENDIX C

Well Construction Logs



OBSERVATION WELL INSTALLATION REPORT

Well No.

MW-1IR

Boring No.

MW-1I

PROJECT	BROWNFIELD CLEANUP PROGRAM #C828148/FORMER AB DICK FACILITY	H&A FILE NO.	128035-008
LOCATION	811 JEFFERSON ROAD, ROCHESTER, NEW YORK	PROJECT MGR.	J. SZUCS
CLIENT	811 JEFFERSON ROAD, LLC	FIELD REP.	D. KELLER
CONTRACTOR	NYEG DRILLING, LLC.	DATE INSTALLED	05/12/17
DRILLER	B. GUYETTE	WATER LEVEL	1.4 ft below PVC riser

Ground El.	555.28	ft	Location	N43°05'07.6754", W77°37'11.0701"	☐ Guard Pipe
El. Datum	NAVD 88 (GEOID 12A)				☒ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL			
FILL	Concrete	Type of protective cover/lock	7/16th inch hex bolt	
	0.5	Height of top of roadway box above ground surface	0.0 ft	
	Sand	Depth of top of riser pipe below ground surface	0.8 ft	
3	1.5	Type of protective casing:	Road Box	
	Bentonite Grout	Length	1.1 ft	
	20	Inside Diameter	8 in	
GLACIAL TILL (upper)	Bentonite	Depth of bottom of guard pipe/roadway box	1.1 ft	
	22.0	Type of Seals	Top of Seal (ft)	
	Filter	Concrete	0.0	0.5
35.0	35.0	Bentonite	20.0	2.0
	(Bottom of Exploration)			
	(Numbers refer to depth from ground surface in feet)			
		Type of riser pipe:	Schedule 40 PVC	
		Inside diameter of riser pipe	2.0 in	
		Type of backfill around riser	Bentonite Grout	
		Diameter of borehole	8 in	
		Depth to top of well screen	25.0 ft	
		Type of screen	Schedule 40 PVC	
		Screen gauge or size of openings	0.01 in	
		Diameter of screen	2.0 in	
		Type of backfill around screen	Filter Sand	
		Depth of bottom of well screen	35.0 ft	
		Bottom of silt trap	35.0 ft	
		Depth of bottom of borehole	35.0 ft	

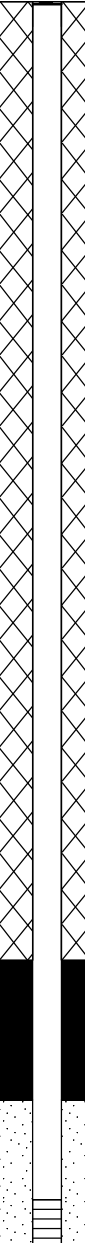
5.0	ft	+	10.0	ft	+	0.0	ft	=	15.0	ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length				

COMMENTS: Existing soil conditions based on boring logs completed by Stantec.
Replaced MW-1I with a 2-in well approximately 25 ft north of the original location.

Monitoring Well: MW-3I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jun-5-2008 / Jun-6-2008
Ground surface elevation: 554.17 ft AMSL
Top of casing elevation: 553.65 ft AMSL
Easting: 1405741
Northing: 1125576

SUBSURFACE PROFILE				SAMPLE DETAILS					WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	N-Value	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)									5000 10000		
			Ground Surface									
			ASPHALT	0.5	1	MA	n/a	34" 71%	VOCs	0.3		Flushmount protective casing
		black, gravel base	1.0									
		SAND	1.5									
		yellowish brown, fine to medium grained, with some fine to coarse gravel, dry	1.9									
1			CLAYEY SILT	4.0						0		
		dark brown, some black staining, dry										
		SAND/SILT										
	5		yellowish brown, sand is fine grained, few clay, dry to moist, few black and orange staining	2	MA	n/a	24" 50%			0		
		SILT/SAND										
		yellowish brown with orange staining, sand is fine grained, few fine to medium gravel, few clay, moist										
2			SAND/SILT	9.9						0.1		
		brown to reddish brown, sand is fine grained, little fine to medium gravel, trace clay, moist to wet										
3	10		SAND/SILT	12.0	3	MA	n/a	32" 67%		0		Grout
		brown, sand is fine grained, some orange coloring, trace fine gravel, moist										
			SAND/SILT	13.4						0		
4			brown, sand is fine grained, little fine to coarse gravel, some orange and black staining									
	15		SAND/SILT	16.0	4	MA	n/a	34" 71%		0.1		
		grayish brown, sand is fine grained, little clay, trace fine to coarse gravel, moist to wet										
5			SAND/SILT	20.0	5	MA	n/a	43" 90%		0		Top of seal (19.2 ft BGS)
		grayish brown, sand is fine grained, little clay, little fine to coarse gravel, moist to wet										
6	20		SAND/SILT		6	MA	n/a	28" 58%		0.3		Bentonite Seal
		grayish brown, sand is fine grained, few clay, little fine to coarse gravel, few medium sand, moist to wet										
7										0.3		Top of sand (22 ft BGS)
												Top of screen (24 ft BGS)

Screen Interval: 24.00 - 34.00 ft BGS
Sand Pack Interval: 22.00 - 35.80 ft BGS
Well Seal Interval: 19.20 - 22.00 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing
SS - split-spoon sample

n/a - not available/applicable

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume



Drawn By/Checked By: OR/RS

Monitoring Well: MW-3I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jun-5-2008 / Jun-6-2008
Ground surface elevation: 554.17 ft AMSL
Top of casing elevation: 553.65 ft AMSL
Easting: 1405741
Northing: 1125576

SUBSURFACE PROFILE				SAMPLE DETAILS					WELL DETAILS		
Depth (m) (ft)	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	N-Value	Recovery	Lab Analyses	PID (ppmV) 5000 10000	Well Diagram	Description
8				7	MA	n/a	20" 42%		0.2		#00N Sand size
9				8	MA	n/a	35" 73%		0		No.10 Slot PVC screen 2 in. diameter
10		SAND/SILT grayish brown, sand is fine grained, little fine to coarse gravel, little medium sand, moist to wet	32.0	9	MA	n/a	34" 71%		0		Bottom of screen (34 ft BGS)
11				10	MA	n/a	29" 60%		0		Sand
12				11	MA	n/a	6" 13%		0		
13			44.0	12	MA	n/a	26" 54%		0		Bentonite Chips
14		SAND/SILT grayish brown, sand is fine grained, little medium sand, little fine to medium gravel, moist to wet									
15											

Screen Interval: 24.00 - 34.00 ft BGS
Sand Pack Interval: 22.00 - 35.80 ft BGS
Well Seal Interval: 19.20 - 22.00 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing
SS - split-spoon sample

n/a - not available/applicable

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume



Drawn By/Checked By: OR/RS

Monitoring Well: MW-3I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jun-5-2008 / Jun-6-2008
Ground surface elevation: 554.17 ft AMSL
Top of casing elevation: 553.65 ft AMSL
Easting: 1405741
Northing: 1125576

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS		
Depth (m) (ft)	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	N-Value	Recovery	Lab Analyses	PID (ppmV) 5000 10000	Well Diagram Description
16		trace clay at 52 to 58.2 ft BGS		13	MA	n/a	13" 27%		0	Bentonite Chips
17				14	MA	n/a	47" 98%		0.2	
18									0.3	
19									0.3	
18		SILTY CLAY grayish brown, some medium to coarse gravel, wet to moist	58.2	15	MA	n/a	46" 96%		0.5	
19		CLAY grayish brown, little silt, wet to moist	58.7						0.5	
20				16	MA	n/a	48" 100%		0.6	
20		CLAY grayish brown, little silt, little fine to medium sand, wet to moist	63.7						0.5	
21		SILT/SAND grayish brown, sand is fine grained, some fine to coarse gravel, wet	64.0	17	MA	n/a	22" 46%		0.7	
21		GRAVEL greenish grey, fine to coarse grained, wet	64.4							
21		SILT/SAND grayish brown, sand is fine to medium grained, little fine to coarse gravel, tightly compacted, wet	64.6							
21			68.7							
21		SAND/SILT brown, sand is fine grained, some fine to medium gravel, trace coarse gravel, saturated	69.7	18	MA	n/a	31" 65%		0.2	
22			71.4							
22		SAND/SILT brown, sand is fine grained, some fine to coarse angular gravel, saturated, gravel is green, grey, or black	72.0							
		Macrocore refusal at 71.4 ft BGS	73.8	19	SS	16-46-81-105 (127)	18" 75%		0	
		SILT reddish brown, with weathered rock	74.0							

Screen Interval: 24.00 - 34.00 ft BGS
Sand Pack Interval: 22.00 - 35.80 ft BGS
Well Seal Interval: 19.20 - 22.00 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing
SS - split-spoon sample

n/a - not available/applicable

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume



Drawn By/Checked By: OR/RS

Monitoring Well: MW-3I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jun-5-2008 / Jun-6-2008
Ground surface elevation: 554.17 ft AMSL
Top of casing elevation: 553.65 ft AMSL
Easting: 1405741
Northing: 1125576

SUBSURFACE PROFILE				SAMPLE DETAILS						WELL DETAILS	
Depth	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	N-Value	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)								5000 10000		
23		ROCK weathered, greenish grey End of Hole									
24											
80											
25											
85											
26											
27											
90											
28											
29											
95											
30											

Screen Interval: 24.00 - 34.00 ft BGS
 Sand Pack Interval: 22.00 - 35.80 ft BGS
 Well Seal Interval: 19.20 - 22.00 ft BGS

Notes:
 ft AMSL - feet above mean sea level
 ft BGS - feet below ground surface
 ft BTOC - feet below top of casing
 SS - split-spoon sample

n/a - not available/applicable

MA - Macrocore sample
 VOC - Volatile Organic Compounds
 ppmV - parts per million by volume

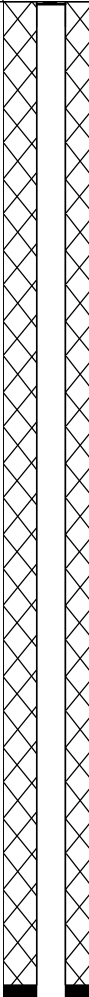


Drawn By/Checked By: OR/RS

Monitoring Well: MW-4I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jun-10-2008 / Jun-11-2008
Ground surface elevation: 553.79 ft AMSL
Top of casing elevation: 553.26 ft AMSL
Easting: 1405632
Northing: 1125679

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)								5000 10000		
			Ground Surface								
			ASPHALT	0.5	1	MA	48" 100%	VOCs	 5.1		Flushmount protective casing
			SAND AND GRAVEL	0.8							
			brown, sand is coarse grained, gravel is fine to medium grained, dry	1.9							
			CLAYEY SILT	2.4							
1			dark brown to black, some orange, yellow and black staining; trace fine gravel; dry						 6.8		
			CLAYEY SILT	4.0	2	MA	34" 71%		 6.1		
	5		brown, dry to moist								
			SAND/SILT	5.0							
			brown, sand is fine grained, trace clay, trace orange and maroon staining, dry to moist								
2			SAND/SILT	8.0					 9		
			brown, sand is fine grained, few clay, trace fine gravel, moist								
			SAND/SILT		3	MA	25" 52%		 10.8		Grout
			brown, with trace orange mottling, sand is fine grained, trace clay, trace fine to medium gravel, moist	8.7							
			SAND/SILT								
			brown, sand is fine grained, trace medium sand, trace fine to coarse gravel, moist								
3	10		SAND/SILT						 8.2		
			brown, sand is fine grained, few clay, few fine to coarse gravel, moist								
4			some orange and black staining at 12.9 to 14 ft BGS		4	MA	22" 46%	VOCs	 10.9		
	15										
				16.0							
5			SAND/SILT		5	MA	19" 40%		 1.7		
			grayish brown, sand is fine grained, few fine to medium gravel, moist								
											
6	20		No Recovery	20.0							Top of seal (19.7 ft BGS) Bentonite Seal
					6	MA	0" 0%				Top of sand (21.9 ft BGS)
											
7											
			SAND/SILT	24.0							Top of screen (24 ft BGS)
			grayish brown, sand is fine grained,								

Screen Interval: 24.00 - 34.00 ft BGS
Sand Pack Interval: 21.90 - 34.00 ft BGS
Well Seal Interval: 19.70 - 21.90 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS



Monitoring Well: MW-4I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jun-10-2008 / Jun-11-2008
Ground surface elevation: 553.79 ft AMSL
Top of casing elevation: 553.26 ft AMSL
Easting: 1405632
Northing: 1125679

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS	
Depth (m) (ft)	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV) 5000 10000	Well Diagram Description
8		little fine to coarse gravel, wet		7	MA	32" 67%		0.9	
9		trace clay at 28 to 32 ft BGS		8	MA	34" 71%		1.2 2.3 2.3	
10		SAND/SILT grayish brown, sand is fine grained, little fine to coarse gravel, trace clay, few medium sand, wet	32.0	9	MA	26" 54%		1.4 1.2	
11		End of Hole	36.0						
12									
13									
14									
15									

Screen Interval: 24.00 - 34.00 ft BGS
Sand Pack Interval: 21.90 - 34.00 ft BGS
Well Seal Interval: 19.70 - 21.90 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS

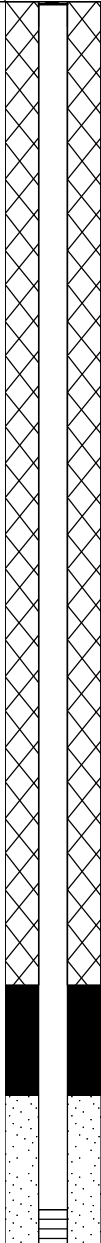


	OBSERVATION WELL INSTALLATION REPORT		Well No. MW-5D-R																
			Boring No.																
PROJECT LOCATION CLIENT CONTRACTOR DRILLER	Former AB Dick Facility, Rochester, New York 811 Jefferson Road, Henrietta, NY 811 Jefferson Road, LLC Nothnagle Drilling, Inc. Steve Loranty		H&A FILE NO. PROJECT MGR. FIELD REP. DATE INSTALLED WATER LEVEL	36277-020 J. Szucs D. Nostrant 10/11/2016 															
Ground El. <u>553.5</u> ft El. Datum <u>NAVD83</u>		Location _____	☐ Guard Pipe ☒ Roadway Box																
SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL	Type of protective cover/lock <u>Flushmount</u> Height/Depth of top of guard pipe/roadway box above/below ground surface <u>0.3</u> ft Height/Depth of top of riser pipe above/below ground surface <u>0.0</u> ft Type of protective casing: <u>steel</u> Length <u>1.5</u> ft Inside Diameter <u>1.2</u> ft Depth of bottom of guard pipe/roadway box <u>1.2</u> ft <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Type of Seals</th> <th>Top of Seal (ft)</th> <th>Thickness (ft)</th> </tr> </thead> <tbody> <tr> <td>Concrete</td> <td>0.3 ags</td> <td>1.3</td> </tr> <tr> <td>Grout</td> <td>1.0</td> <td>58.0</td> </tr> <tr> <td>Bentonite Seal</td> <td>59.0</td> <td>2.0</td> </tr> <tr> <td>Sand</td> <td>61.0</td> <td>12.5</td> </tr> </tbody> </table> Type of riser pipe: <u>Outside: Steel Casing, Inside: PVC</u> Outside/Inside length of riser pipe <u>48.0/63.5</u> ft Outside/Inside diameter of riser pipe <u>10.0/2.0</u> in Type of backfill around inside riser <u>Sand, Bentonite, Grout</u> Diameter of borehole <u>8.0</u> in Depth to top of well screen <u>63.5</u> ft Type of screen <u>PVC 10 slot</u> Screen gauge or size of openings <u>0.0</u> in Diameter of screen <u>2.0</u> in Type of backfill around screen <u>Sand</u> Depth of bottom of well screen <u>73.5</u> ft Bottom of Silt trap <u>73.7</u> ft Depth of bottom of borehole <u>73.7</u> ft			Type of Seals	Top of Seal (ft)	Thickness (ft)	Concrete	0.3 ags	1.3	Grout	1.0	58.0	Bentonite Seal	59.0	2.0	Sand	61.0	12.5
Type of Seals	Top of Seal (ft)	Thickness (ft)																	
Concrete	0.3 ags	1.3																	
Grout	1.0	58.0																	
Bentonite Seal	59.0	2.0																	
Sand	61.0	12.5																	
Please see MWE-5D-R Tes Boring Report																			
Grout 1.0 59.0 Bentonite 61.0 Sand																			
73.5 (Bottom of Exploration) 73.7 (Numbers refer to depth from ground surface in feet)		(Not to Scale)																	
<u>63.5</u> ft + <u>10</u> ft + <u>0.5</u> ft = <u>73.7</u> ft Riser Pay Length (L1) Length of screen (L2) Length of silt trap (L3) Pay length																			
COMMENTS: _____																			

Monitoring Well: MW-6I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: CME-75 Hollow Stem Auger and Macrocore
Date started/completed: Oct-3-2008
Ground surface elevation: 555.34 ft AMSL
Top of casing elevation: 554.79 ft AMSL
Easting: 1405763
Northing: 1125770

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV) 5000 10000	Well Diagram	Description
(m)	(ft)										
1			Ground Surface CONCRETE	0.9	1	MA	37" 77%		0		Flushmount protective casing
			SILT dark brown, trace medium to coarse gravel, moist	2.4							
			SAND brown, fine grained, few fine to medium gravel, few clay, moist	3.1							
			No Recovery	4.0							
5			SILTY CLAY reddish brown, gray and pink mottling, dry to moist	5.7	2	MA	43" 90%		0		Grout
			SILT/SAND reddish brown, sand is fine grained, little clay, few fine to medium gravel, moist	6.5							
2			SILTY CLAY reddish brown, few fine to medium gravel, dry to moist	8.8							
3	10		SILT/SAND reddish brown, sand is fine grained, trace clay, trace fine to medium gravel, little coarse gravel, moist to wet	13.5	3	MA	35" 73%	VOCs	0.1		
		pocket of orange fine sand, dry to moist									
4			CLAYEY SILT reddish brown, tight, few fine to medium gravel, few fine sand, moist	16.0	4	MA	48" 100%		0		
	15			16.6							
5			SILT/SAND reddish brown, sand is fine grained, few fine gravel, few clay, dry to moist	18.5	5	MA	43" 90%	VOCs	0		
			SAND/SILT grayish brown, sand is fine grained, trace clay, few fine to medium gravel, trace coarse gravel, moist								
6	20		SAND/SILT grayish brown, sand is fine grained, few clay, few fine to medium gravel, trace coarse gravel, moist								
				21.7	6	MA	34" 71%		0		
7			SAND/SILT grayish brown, sand is fine grained, trace clay, few fine to medium gravel, trace coarse gravel, moist								
									0.1		Top of seal (19.7 ft BGS) Bentonite Seal
											Top of sand (21.9 ft BGS)
											Top of screen (24.2 ft BGS)

Screen Interval: 24.20 - 34.20 ft BGS
Sand Pack Interval: 21.90 - 34.20 ft BGS
Well Seal Interval: 19.70 - 21.90 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

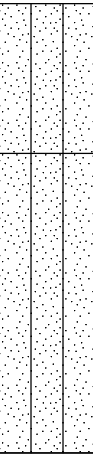
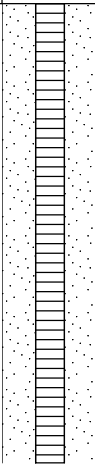
Drawn By/Checked By: OR/RS



Monitoring Well: MW-6I

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: CME-75 Hollow Stem Auger and Macrocore
Date started/completed: Oct-3-2008
Ground surface elevation: 555.34 ft AMSL
Top of casing elevation: 554.79 ft AMSL
Easting: 1405763
Northing: 1125770

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS	
Depth (m) (ft)	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV) 5000 10000	Well Diagram Description
8		at 25.3 to 26.2 ft BGS, few medium sand		7	MA	38" 79%		0.1	
			28.0					0.1	
9		SAND/SILT grayish brown, sand is fine grained, few medium sand, trace clay, few fine to medium gravel, trace coarse gravel, moist to wet		8	MA	13" 27%		0	
10				9	MA	24" 100%	VOCs	0	
		End of Hole	34.0						Bottom of screen (34.2 ft BGS)
11									
12									
13									
14									
15									

Screen Interval: 24.20 - 34.20 ft BGS
Sand Pack Interval: 21.90 - 34.20 ft BGS
Well Seal Interval: 19.70 - 21.90 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS





OBSERVATION WELL INSTALLATION REPORT

Well No.
MW-08R
Boring No.
MW-08

PROJECT	BROWNFIELD CLEANUP PROGRAM #C828148/FORMER AB DICK FACILITY	H&A FILE NO.	128035-008
LOCATION	811 JEFFERSON ROAD, ROCHESTER, NEW YORK	PROJECT MGR.	J. SZUCS
CLIENT	811 JEFFERSON ROAD, LLC	FIELD REP.	D. KELLER
CONTRACTOR	NYEG DRILLING, LLC.	DATE INSTALLED	05/10/17
DRILLER	B. GUYETTE	WATER LEVEL	0.8 (from PVC)

Ground El.	555.28	ft	Location	N43°05'07.4762", W77°37'09.7450"	☐ Guard Pipe
El. Datum	NAVD 88 (GEOID 12A)				☒ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL		
FILL	Concrete	Type of protective cover/lock	7/16th inch hex bolt
	0.5	Height of top of roadway box above ground surface	0.0 ft
	Sand	Depth of top of riser pipe below ground surface	0.3 ft
3	1.5	Type of protective casing:	Road Box
		Length	1.1 ft
		Inside Diameter	8 in
GLACIAL TILL (upper)	Bentonite	Depth of bottom of guard pipe/roadway box	1.1 ft
		Type of Seals	Top of Seal (ft) Thickness (ft)
		Concrete	0.0 0.5
		Bentonite	1.5 3.5
		Type of riser pipe:	Schedule 40 PVC
		Inside diameter of riser pipe	2.0 in
		Type of backfill around riser	Bentonite
		Diameter of borehole	8 in
		Depth to top of well screen	7.0 ft
	Type of screen	Schedule 40 PVC	
	Screen gauge or size of openings	0.01 in	
	Diameter of screen	2.0 in	
	Type of backfill around screen	Filter Sand	
	Depth of bottom of well screen	17.0 ft	
	Bottom of silt trap	17.0 ft	
	Depth of bottom of borehole	17.0 ft	

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

(Not to Scale)

7.0 ft + 10.0 ft + 0.0 ft = 17.0 ft
Riser Pay Length (L1) Length of screen (L2) Length of silt trap (L3) Pay length

COMMENTS: Existing soil conditions based on boring logs completed by Stantec.
Removed existing 1-inch diameter well and replaced it with a 2-in well at the original location.



2250 Brighton Henrietta Town Li
Rochester, NY 14623
(585) 475-1440

Test Boring No.: GP-28

Page 1 of 1

Project:	811 Jefferson Road	Drill Contractor:	TREC	Start Date:	11/21/2005
Project #:	190500279	Driller:	S. Stockmaster	Completion Date:	11/21/2005
Client:		Elevation:		Drilling Method:	Direct Push
Location:	See Figure	Weather:		Supervisor:	D. Gnage

	SAMPLE				Soil Information	
	PID	Rec.	No.	Depth	Remarks	
0						
0-3.5	0.5/0.0	3.7	1	0-4	Asphalt and base	0.5
					Brown, Silty CLAY, little fine Sand, trace fine to coarse Gravel, dry	
						3.5
					Brown, SILT, some fine Sand, little Clay, trace fine Gravel, moist to wet	
	0.3/0.0	2.7	2	4-8		
5						
					@ 7' increase in sand content	
						8.0
	0.3/0.0	2.1		8-11	Brown, SILT and fine Sand, trace Clay and fine Gravel, wet	
10						
						11.0
					End of Boring	
15						
20						

Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.



2250 Brighton Henrietta Town Li
Rochester, NY 14623
(585) 475-1440

Test Boring No.: GP-33

Page 1 of 1

Project:	811 Jefferson Road	Drill Contractor:	TREC	Start Date:	11/21/2005
Project #:	190500279	Driller:	S. Stockmaster	Completion Date:	11/21/2005
Client:		Elevation:		Drilling Method:	Direct Push
Location:	See Figure	Weather:		Supervisor:	D. Gnage

	SAMPLE				Soil Information
	PID	Rec.	No.	Depth	Remarks
0	0.7/0.0	3.8	1	0-4	Asphalt and base 0.6
					Brown/gray, Silty CLAY, little fine Sand, trace fine Gravel and Cinder, dry
					2.3
					Same, Red brown/Brown, no Cinder
		2.6	2	4-8	
5					5.4
5.5-8	0.3/0.0				Brown, SILT, some fine Sand, little Clay, trace fine Gravel, moist (TILL)
	0.2/0.0	1.1	3	8-10.4	
10					10.4
					Refusal
15					
20					

Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.

Monitoring Well: MW-38

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jul-11-2008
Ground surface elevation: 553.98 ft AMSL
Top of casing elevation: 553.51 ft AMSL
Easting: 1405813
Northing: 1125432

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)		Ground Surface						5000 10000		
			TOPSOIL brown, silty, roots, dry to moist	0.3	1	MA	48" 100%				Flushmount protective casing Grout
			SILT/SAND brown, sand is fine grained, few clay, trace medium sand, moist, orange mottling black staining at 1.8 ft BGS	2.4							
1			SILT/SAND pinkish brown with orange mottling, sand is fine grained, little medium sand, moist	3.7							
	5		SILT/SAND brown with orange mottling, sand is fine grained, little medium sand, few medium to coarse gravel, dry to moist	5.1	2	MA	48" 100%				Top of seal (7.2 ft BGS)
2			SILT/SAND brown with orange mottling, sand is fine grained, few clay, few fine to coarse gravel, moist	8.0							
			SILT/SAND brown with orange mottling, sand is fine grained, little clay, few fine to medium gravel, moist		3	MA	30" 63%	VOCs			Bentonite Seal
3	10			12.0							
			SILT/SAND brown with orange mottling, sand is fine grained, trace clay, trace fine gravel, moist		4	MA	35" 73%	VOCs, SVOCs, Pesticides, PCBs, Metals			Top of screen (12 ft BGS)
4											
	15				5	MA	32" 67%				#00N Sand size
5				17.9							
			SILT/SAND grayish brown, sand is fine grained, few fine to medium gravel, trace clay, trace medium sand, moist, product on outside of sleeve at 20-24 ft BGS		6	MA	35" 73%				No.10 Slot PVC screen 2 in. diameter
6	20										
					6	MA	35" 73%				Bottom of screen (22 ft BGS) Sand
7				24.0							
			SILT/SAND grayish brown, sand is fine grained,								Bentonite Chips

Screen Interval: 12.00 - 22.00 ft BGS
Sand Pack Interval: 9.70 - 22.00 ft BGS
Well Seal Interval: 7.20 - 9.70 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

n/a - not available/applicable

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

9999 - PID reading over the range (9999 ppm) of the
instrument

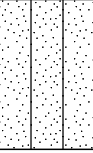
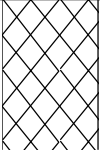


Drawn By/Checked By: OR/RS

Monitoring Well: MW-38

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jul-11-2008
Ground surface elevation: 553.98 ft AMSL
Top of casing elevation: 553.51 ft AMSL
Easting: 1405813
Northing: 1125432

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS	
Depth	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram
(m) (ft)								5000 10000	
8		little fine to coarse gravel, few medium sand, moist		7	MA	37" 77%	VOCs	493.9	
		End of Hole	28.0					31.9	
9									
10									
11									
12									
13									
14									
15									

Screen Interval: 12.00 - 22.00 ft BGS
Sand Pack Interval: 9.70 - 22.00 ft BGS
Well Seal Interval: 7.20 - 9.70 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

n/a - not available/applicable

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

9999 - PID reading over the range (9999 ppm) of the instrument

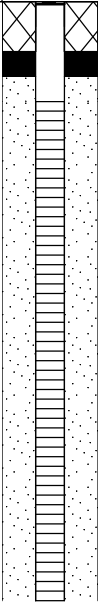
Drawn By/Checked By: OR/RS



Monitoring Well: MW-54

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jul-17-2008
Ground surface elevation: 545.46 ft AMSL
Top of casing elevation: 545.02 ft AMSL
Easting: 1405734
Northing: 1125376

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)		Ground Surface						5000 10000		
			ASPHALT with gravel base, dry	0.6	1	MA	41" 85%				Flushmount protective casing Grout Bentonite Seal Top of seal (1.0 ft BGS) Top of sand (1.5 ft BGS) Top of screen (2 ft BGS)
1			SAND/SILT brown, with trace orange mottling, sand is fine grained, few fine to medium gravel, trace coarse gravel, dry to moist orange and black mottling and increased clay between 2.6 and 4 ft BGS								
			SAND/SILT brown, sand is fine grained, some fine to medium gravel, trace coarse gravel, moist	4.0							
5			SAND/SILT brown, sand is fine grained, some fine to medium gravel, trace coarse gravel, moist		2	MA	44" 92%	VOCs			#00N Sand size
2			SAND brown, fine grained, wet	6.3							
			SAND/SILT brown, sand is fine grained, some fine to medium gravel, trace coarse gravel, moist	6.7							
			SAND/SILT grayish brown, sand is fine grained, some fine to medium gravel, trace coarse gravel, moist	8.5	3	MA	41" 85%	VOCs			No.10 Slot PVC screen 2 in. diameter
3	10										
					4	MA	8" 17%				Bottom of screen (12 ft BGS)
4											
15											
5			End of Hole	16.0							
6	20										
7											

Screen Interval: 2.00 - 12.00 ft BGS
Sand Pack Interval: 1.50 - 12.00 ft BGS
Well Seal Interval: 1.00 - 1.50 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS



Monitoring Well: MW-55

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jul-17-2008
Ground surface elevation: 544.58 ft AMSL
Top of casing elevation: 544.03 ft AMSL
Easting: 1405668
Northing: 1125279

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS	
Depth	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram
(m) (ft)								5000 10000	
		Ground Surface							
1		TOPSOIL brown, silty, coarse gravel at 0.4 and 0.6 ft, moist	0.7	1	MA	18" 38%		0.2	
5		SAND/SILT brown, sand is fine grained, little coarse gravel, dry and becoming moist at 1.3 ft BGS	4.0						
2		POOR RECOVERY consisting of a cobble with brown fine grained sand/silt, moist		2	MA	1" 2%		0.2	
3		SAND/SILT brown, sand is fine grained, few medium sand, little fine to medium gravel, few coarse gravel, moist	8.0						
10		SAND/SILT brown, sand is fine grained, little fine to medium gravel, moist	9.7	3	MA	42" 88%	VOCs	0	
		SAND/SILT grayish brown, sand is fine grained, little fine to medium gravel, trace coarse gravel, moist	10.3					0	
4		SAND/SILT grayish brown, sand is fine grained, little fine to medium gravel, trace coarse gravel, few medium sand, moist	12.0	4	MA	36" 75%		0.1	
15								0	
5		End of Hole	16.0						
6									
20									
7									

Screen Interval: 2.00 - 12.00 ft BGS
Sand Pack Interval: 1.50 - 12.00 ft BGS
Well Seal Interval: 1.00 - 1.50 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS



Monitoring Well: MW-58

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: BK-81- Hollow Stem Auger and Macrocore
Date started/completed: Jul-18-2008
Ground surface elevation: 544.24 ft AMSL
Top of casing elevation: 543.74 ft AMSL
Easting: 1405623
Northing: 1125378

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)		Ground Surface						5000 10000		
			ASPHALT	0.5							Flushmount protective casing
			ASPHALT GRAVEL BASE mixed with soil	0.7							Grout
1			SAND/SILT brown, sand is fine grained, few clay, some fine to coarse gravel, dry to moist		1	MA	38" 79%		0.1		Top of seal (1.0 ft BGS)
				4.5					0.3		Bentonite Seal
5			SAND/SILT brown with orange mottling, sand is fine grained, little grading to trace medium sand, little fine to medium gravel, trace coarse gravel, moist						0.1		Top of sand (1.5 ft BGS)
2			SAND/SILT grayish brown, sand is fine grained, few medium sand, little fine to medium gravel, trace coarse gravel, moist	6.9	2	MA	42" 88%	VOCs	0.1		Top of screen (2.0 ft BGS)
			SAND/SILT grayish brown, sand is fine grained, little medium sand, little fine to medium gravel, trace coarse gravel, moist	8.5					0.1		
3	10		SAND/SILT grayish brown, sand is fine grained, little medium sand, little fine to medium gravel, trace coarse gravel, moist		3	MA	28" 58%		0.1		No.10 Slot PVC screen 2 in. diameter
				12.5					0.1		
4			SAND/SILT grayish brown, sand is fine grained, little medium sand, some fine to medium gravel, trace coarse gravel, moist		4	MA	36" 75%		0.1		Bottom of screen (12.0 ft BGS)
15									0.1		
5			End of Hole	16.5							
6	20										
7											

Screen Interval: 2.00 - 12.00 ft BGS
Sand Pack Interval: 1.50 - 12.00 ft BGS
Well Seal Interval: 1.00 - 1.50 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS



Monitoring Well: MW-62

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: CME-75 Hollow Stem Auger and Macrocore
Date started/completed: Oct-7-2008
Ground surface elevation: 554.52 ft AMSL
Top of casing elevation: 553.89 ft AMSL
Easting: 1405853
Northing: 1125433

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)		Ground Surface						5000 10000		
			TOPSOIL silty, brown, roots, moist	0.5	1	MA	41" 85%				Flushmount protective casing Grout
			SAND/SILT brown with pink mottling, sand is fine grained, trace fine gravel, dry to moist	2.2							Top of seal (1.5 ft BGS)
1			SAND/SILT brown with black and orange mottling, sand is fine grained, with some clay, trace fine gravel, moist	4.0							Bentonite
5			SILT/SAND brown with pink and orange mottling, sand is fine grained, few fine to medium gravel, trace coarse gravel, few clay, moist		2	MA	44" 92%				Top of sand (5.9 ft BGS)
2			pocket of coarse white/black sand on side of core at 6.3 and 6.4 ft	8.0							
			SAND/SILT brown, sand is fine grained, trace clay, little fine to medium gravel, trace orange mottling, few coarse gravel, moist to wet		3	MA	47" 98%				Top of screen (8.0 ft BGS)
3	10			10.7							#00N Sand size
			SAND/SILT brown, sand is fine grained, trace fine gravel, trace coarse gravel, little clay, moist	12.0							No.10 Slot PVC screen 2 in. diameter
4			SAND/SILT brown, sand is fine grained, few fine to medium gravel, few coarse gravel, trace orange and black mottling, trace clay, few medium sand, moist to wet		4	MA	36" 75%				
15											
5				18.0	5	MA	30" 83%	VOCs			Bottom of screen (18.0 ft BGS)
			SAND/SILT brown, sand is fine grained, few fine to medium gravel, trace orange mottling, little clay, moist	19.0							Bentonite Chips
6	20		SAND/SILT grayish brown, sand is fine grained, few medium sand, few fine to medium gravel, few clay, moist to wet		6	MA	28" 58%	VOCs			
7				23.0							
			End of Hole								

Screen Interval: 8.00 - 18.00 ft BGS
Sand Pack Interval: 5.90 - 18.00 ft BGS
Well Seal Interval: 1.50 - 5.90 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

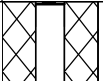
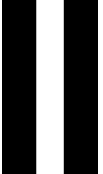
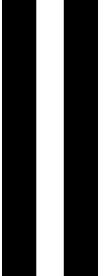
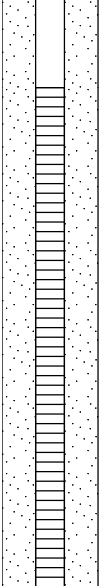
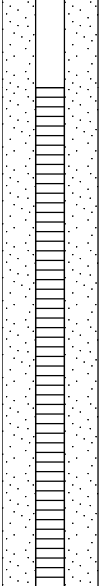
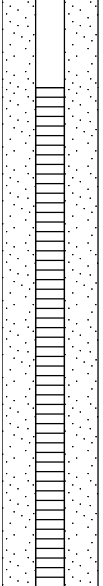
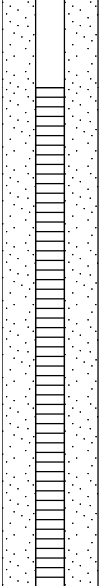
Drawn By/Checked By: OR/RS



Monitoring Well: MW-63

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: CME-75 Hollow Stem Auger and Macrocore
Date started/completed: Oct-7-2008
Ground surface elevation: 553.33 ft AMSL
Top of casing elevation: 552.91 ft AMSL
Easting: 1405732
Northing: 1125430

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS									
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description						
(m)	(ft)		Ground Surface						5000 10000								
			TOPSOIL silty, brown, organic rich, trace medium gravel, moist	0.7	1	MA	44" 92%				Flushmount protective casing						
			SILT/SAND brown with orange mottling, sand is fine grained, trace fine gravel, few clay, moist													Grout	
1																Top of seal (1.6 ft BGS)	
	5			5.3	2	MA	44" 92%				Bentonite						
			SAND/SILT brown with pink and orange mottling, sand is fine grained, trace clay, trace fine and coarse gravel, moist														
2			SAND/SILT brown, sand is fine grained, trace fine and coarse gravel, few clay, moist														
				8.0	3	MA	35" 73%	VOCs									
3	10		SAND/SILT brown, sand is fine grained, few fine to medium gravel, trace coarse gravel, trace medium sand, trace clay, moist to wet														Top of sand (11.1 ft BGS)
					4	MA	10" 28%										
4			trace black fine sand at 13 and 13.2 ft BGS on outside of core														Top of screen (13.0 ft BGS)
	15			15.0	5	MA	44" 92%				#00N Sand size						
			SAND/SILT grayish brown, sand is fine grained, few fine to medium gravel, trace clay, trace medium sand, trace coarse gravel, moist to wet														
5																	
				19.0	6	MA	48" 100%	VOCs			No.10 Slot PVC screen 2 in. diameter						
6	20		SAND/SILT grayish brown, sand is fine grained, few fine to medium gravel, few coarse gravel, few medium sand, moist														
				21.6	6	MA	48" 100%	VOCs									
			SAND grayish brown, fine to medium grained, saturated														
7			End of Hole	23.0							Bottom of screen (23.0 ft BGS)						

Screen Interval: 13.00 - 23.00 ft BGS
Sand Pack Interval: 11.10 - 23.00 ft BGS
Well Seal Interval: 1.60 - 11.10 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume

n/a - not available/applicable

Drawn By/Checked By: OR/RS



Monitoring Well: MW-69

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Nothnagle Drilling Inc.

Drilling method: CME-75 Hollow Stem Auger and Macrocore
Date started/completed: Mar-30-2009
Ground surface elevation: 552.05 ft AMSL
Top of casing elevation: 551.66 ft AMSL
Easting: 1405608
Northing: 1125466

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)		Ground Surface						5000 10000		
			Not sampled								Flushmount protective casing
				1.00							Top of seal (0.5 ft BGS)
			ASPHALT	1.20							
			SAND/SILT brown, some orange mottling, sand is fine grained, trace clay, few fine gravel, moist to wet from 0 to 1.8 ft, moist from 1.8 to 2.3 ft, gasoline odour at surface		1	MA	28" 58%	VOCs VOCs	1.7		Bentonite seal
2											Top of sand (2.5 ft BGS) Top of screen (3.0 ft BGS)
1											
	4								0.7		
				5.00							
			POOR RECOVERY brown fine grained sand/silt, few clay, few coarse gravel, moist		2	MA	4" 8%		0		#00N Sand size
6											
2											
	8										
				9.00							
			SAND/SILT brown, sand is fine grained, little fine gravel, trace coarse gravel, moist to wet		3	MA	n/a		0		No.10 Slot PVC screen 2 in. diameter
3	10										
	12								0		
				13.00							
4			End of Hole								Bottom of screen (13.0 ft BGS)
	14										

Screen Interval: 3.00 - 13.00 ft BGS
Sand Pack Interval: 2.50 - 13.00 ft BGS
Well Seal Interval: 0.50 - 2.50 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

n/a - not available/applicable

MA - Macrocore sample
VOC - Volatile Organic Compounds
ppmV - parts per million by volume



Drawn By/Checked By: OR/RS

Monitoring Well: MW-70			
Project:	AB Dick	Drilling method:	CME-75 Hollow Stem Auger and Macrocore
Client:	811 Jefferson Rd. LLC	Date started/completed:	Mar-30-2009
Location:	811 Jefferson Rd., Henrietta, NY, USA	Ground surface elevation:	549.26 ft AMSL
Number:	190500279.206	Top of casing elevation:	548.99 ft AMSL
Field investigator:	S.Reynolds Smith	Easting:	1405441
Contractor:	Nothnagle Drilling Inc.	Northing:	1125466

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS			
Depth		Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV)	Well Diagram	Description
(m)	(ft)										
			Ground Surface						5000 10000		
			Not sampled								Flushmount protective casing
				1.00							Grout
			SILT/SAND brown, sand is fine grained, few clay, trace black staining, moist	1.50	1	MA	19" 40%		● 0		Top of seal (1 ft BGS)
2			SAND/SILT brown with orange mottling, sand is fine grained, few fine to medium gravel, moist, trace pink and mint green mottling	2.60							Bentonite seal
			No recovery								Top of sand (2.8 ft BGS)
1											Top of screen (3.2 ft BGS)
4				5.00					● 0		
			SAND/SILT brown, sand is fine grained, little fine to medium grained gravel, moist to wet		2	MA	36" 75%	VOCs	● 0		#00N Sand size
6											
2											
8											
				9.00					● 0		
			SAND/SILT brown, sand is fine grained, little fine to medium grained gravel, trace clay, moist, trace red mottling, some orange mottling		3	MA	30" 63%		● 0		No.10 Slot PVC screen 2 in. diameter
3											
10											
12											
4				13.00					● 0		
			End of Hole						-----		Bottom of screen (13.2 ft BGS)
14											

Monitoring Well: MW-74

Project: AB Dick
Client: 811 Jefferson Rd. LLC
Location: 811 Jefferson Rd., Henrietta, NY, USA
Number: 190500279.206
Field investigator: S.Reynolds Smith
Contractor: Geologic

Drilling method: CME-55 Hollow Stem Auger and Macrocore
Date started/completed: Apr-1-2010
Ground surface elevation: 551.11 ft AMSL
Top of casing elevation: 550.55 ft AMSL
Easting: 1405496
Northing: 1125618

SUBSURFACE PROFILE				SAMPLE DETAILS				WELL DETAILS	
Depth	Graphic Log	Lithologic Description	Depth (ft BGS)	Sample Number	Sample Type	Recovery	Lab Analyses	PID (ppmV) 5000 10000	Well Diagram Description
(m) (ft)		Ground Surface							
		ASPHALT	551.11						Flushmount protective casing
		ASPHALT GRAVEL BASE	0.00						Cement
		wet	550.71						Top of seal (1.0 ft BGS)
		SILTY CLAY	0.40					2.3	Bentonite
		brown, trace gravel, tight, dry, gray mottling							Top of sand (2.5 ft BGS)
2		CLAYEY SILT	550.41						Top of screen (3.0 ft BGS)
		brown with gray mottling, tight, dry	0.70						
		No Recovery	549.21	1	MA	25" 52%			
1			1.90						
4									
		SILT/FINE SAND	548.61					2.2	#0 Sand size
		brown, trace clay, few fine to coarse grained gravel, wet	2.50						
2				2	MA	32" 67%	TCL VOCs		
6									
8									
		SILT/FINE SAND	546.71					0.6	No.10 Slot PVC screen 2 in. diameter
		brown, few fine to coarse grained gravel, few clay, wet	4.40						
3				3	MA	40" 83%		1.4	
10									
12									
4				4	MA	24" 100%		0.1	Bottom of screen (13.0 ft BGS)
14									
		End of Hole	542.71 8.40						

Screen Interval: 3.00 - 13.00 ft BGS
Sand Pack Interval: 2.50 - 13.00 ft BGS
Well Seal Interval: 1.00 - 2.50 ft BGS

Notes:
ft AMSL - feet above mean sea level
ft BGS - feet below ground surface
ft BTOC - feet below top of casing

MA - Macrocore sample
VOCs - Volatile Organic Compounds
ppmV - parts per million by volume
TCL - Target compound list

n/a - not available/applicable

Drawn By/Checked By: OR/RS





OBSERVATION WELL INSTALLATION REPORT

Well No.

MW-76

Boring No.

MW-76

PROJECT FORMER AB DICK FACILITY

H&A FILE NO. 128437-010

LOCATION 811 JEFFERSON ROAD, HENRIETTA, MONROE COUNTY, NEW YORK

PROJECT MGR. J. SZUCS

CLIENT NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIELD REP. D. KELLER

CONTRACTOR NOTHNAGLE DRILLING, INC.

DATE INSTALLED 09/11/14

DRILLER T. MANGEFRIDA

WATER LEVEL 27.10

Ground El. 549.20 ft.
El. Datum NAVD 83

Location 1125636.16 N, 1405370.78 E

☐ Guard Pipe☒ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL	Type of protective cover/lock			9/16th inch hex bolt		
FILL	Concrete	1.0	1.0	Height of top of roadway box above ground surface	0.0 ft.		
					Depth of top of riser pipe below ground surface	0.5 ft.	
Alluvial Deposits	Sand	3.0	Type of protective casing:	Road Box			
				Length	1.1 ft.		
					Inside Diameter	8.0 in	
				Depth of bottom of guard pipe/roadway box		1.1 ft.	
Grout	13.8	17.5	Type of Seals		Type of Seal (ft.)	Thickness (ft.)	
				Concrete	0.0	1.0	
				Grout	3.0	10.8	
				Bentonite	13.8	3.7	
Bentonite	13.8	17.5	Type of riser pipe:	Schedule 40 PVC			
				Inside diameter of riser pipe	2.0 in		
					Type of backfill around riser	cuttings	
				Diameter of borehole		8.0 in	
Depth to top of well screen	18.5 ft.						
	Glaciolacustrine Deposits	20.0	28.5	Type of screen	Schedule 40 PVC		
Screen gauge or size of openings					0.01 in		
					Diameter of screen	2.0 in	
Type of backfill around screen						Filter Sand	
	Depth of bottom of well screen	28.5 ft.					
Bottom of silt trap		28.5 ft.					
	Depth of bottom of borehole	28.5 ft.					

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

(Not to Scale)

18.5 ft. + 10.0 ft. + 0.0 ft. = 28.5 ft.
Riser Pay Length (L1) Length of screen (L2) Length of silt trap (L3) Pay length

COMMENTS:



OBSERVATION WELL INSTALLATION REPORT

Well No.

MW-77

Boring No.

MW-77

PROJECT FORMER AB DICK FACILITY

LOCATION 811 JEFFERSON ROAD, HENRIETTA, MONROE COUNTY, NEW YORK

CLIENT NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CONTRACTOR NOTHNAGLE DRILLING, INC.

DRILLER T. MANGEFRIDA

H&A FILE NO. 128437-010

PROJECT MGR. J. SZUCS

FIELD REP. D. KELLER

DATE INSTALLED 09/12/14

WATER LEVEL 0.10

Ground El. 544.10 ft
El. Datum NAVD 83

Location 112533.075 N 1405645.34 E

☐ Guard Pipe☒ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL	Type of protective cover/lock		9/16th inch hex bolt	
FILL	Concrete	1.0	Height of top of roadway box above ground surface	0.0 ft	
			Depth of top of riser pipe below ground surface	0.3 ft	
1.5	Sand	1.5	Type of protective casing:	Road Box	
			Length	1.1 ft	
Alluvial Deposits		1.5	Inside Diameter	8.0 in	
			Depth of bottom of guard pipe/roadway box	1.1 ft	
8.2	Bentonite	5.5	Type of Seals	Top of Seal (ft)	Thickness (ft)
			Concrete	0.0	1.0
Glaciolacustrine Deposits		5.5	Bentonite	5.5	4.4
9.9	Filter Sand	9.9	Type of riser pipe:	Schedule 40 PVC	
			Inside diameter of riser pipe	2.0 in	
		9.9	Type of backfill around riser	cuttings	
		9.9	Diameter of borehole	8.0 in	
			Depth to top of well screen	11.0 ft	
		9.9	Type of screen	Schedule 40 PVC	
			Screen gauge or size of openings	0.01 in	
		9.9	Diameter of screen	2.0 in	
			Type of backfill around screen	Filter Sand	
		9.9	Depth of bottom of well screen	21.0 ft	
			Bottom of silt trap	21.0 ft	
		9.9	Depth of bottom of borehole	21.0 ft	

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

(Not to Scale)

11.0 ft + 10.0 ft + 0.0 ft = 21.0 ft
Riser Pay Length (L1) Length of screen (L2) Length of silt trap (L3) Pay length

COMMENTS:



OBSERVATION WELL INSTALLATION REPORT

Well No.

MW-78

Boring No.

MW-78

PROJECT FORMER AB DICK FACILITY

H&A FILE NO. 128437-010

LOCATION 811 JEFFERSON ROAD, HENRIETTA, MONROE COUNTY, NEW YORK

PROJECT MGR. J. SZUCS

CLIENT NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIELD REP. D. KELLER

CONTRACTOR NOTHNAGLE DRILLING, INC.

DATE INSTALLED 09/11/14

DRILLER T. MANGEFRIDA

WATER LEVEL 6.95 *

Ground El. 544.10 ft
El. Datum NAVD 83

Location 1125325.44 N 1405647.80 E

☐ Guard Pipe☒ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL	Type of protective cover/lock	9/16th inch hex bolt
FILL	Concrete	Height of top of roadway box above ground surface	0.0 ft
0.8	1	Depth of top of riser pipe below ground surface	0.3 ft
Alluvial Deposits	Sand	Type of protective casing:	Road Box
		Length	1.1 ft
		Inside Diameter	8.0 in
8.3		Depth of bottom of guard pipe/roadway box	1.1 ft
		Type of Seals	Top of Seal (ft) Thickness (ft)
		Concrete	0.0 0.5
		Bentonite	17.6 4.2
	17.6	Type of riser pipe:	Schedule 40 PVC
	Bentonite	Inside diameter of riser pipe	2.0 in
	21.8	Type of backfill around riser	cuttings
Glaciolacustrine Deposits		Diameter of borehole	8.0 in
		Depth to top of well screen	23.0 ft
		Type of screen	Schedule 40 PVC
		Screen gauge or size of openings	0.01 in
		Diameter of screen	2.0 in
		Type of backfill around screen	Filter Sand
		Depth of bottom of well screen	33.0 ft
		Bottom of silt trap	33.0 ft
		Depth of bottom of borehole	33.0 ft
33.0	33.0		
(Bottom of Exploration)		(Not to Scale)	
(Numbers refer to depth from ground surface in feet)			

10.0 ft + 23.0 ft + 0.0 ft = 33.0 ft
Riser Pay Length (L1) Length of screen (L2) Length of silt trap (L3) Pay length

COMMENTS:

APPENDIX D

Excavation Work Plan

APPENDIX D – EXCAVATION WORK PLAN (EWP)

D-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination on the Site, the Site owner or their representative will notify the NYSDEC. With respect to the impacted portion of the Unither property to the south of Area 2 bounded on the west by the eastern face of Unither Building 3, on the north by the common boundary line between the Site and the Unither Property, on the east by Clay Road, and on the south by a line one hundred and ninety feet (190') to the south of and paralleling the current common boundary line ("Affected Area"), the Site owner or their representative (and not Unither) will be responsible for promptly making any required notifications to the NYSDEC for implementation of this Excavation Work Plan on the Affected Area; provided that Unither provides sufficient advance written notice to Site owner that the covering soils will be breached, penetrated or temporarily removed, and underlying remaining contamination will be disturbed, and includes in such advance written notice the relevant technical description sufficient to satisfy the Excavation Work Plan notification requirements set forth in detail below Table D-1. Table D-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.

Table D-1: Notifications*

Danielle Miles	585.226.5349 Danielle.miles@dec.ny.gov

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

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for Site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered 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 EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix I of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

D-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 7 of this Appendix.

D-3 SOIL STAGING METHODS

Soil stockpiles will be encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected weekly at a minimum and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC.

D-4 MATERIALS EXCAVATION AND LOAD-OUT

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

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

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).

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all 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.

D-5 MATERIALS TRANSPORT OFF-SITE

All 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.

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 in order to minimize off-site disturbance. Off-site queuing will be prohibited.

D-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material 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 formal 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 Periodic Review Report. 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 minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

D-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Prior to determining whether excavated on-site materials can be reused on-site, adequate sampling and characterization (VOCs, SVOCs, metals, PCBs, pesticides, herbicides) should be completed to ensure that excavated materials meet the applicable Part

375 SCOs. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

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 reused on-site.

D-8 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including but not limited to, excavation dewatering, decontamination waters 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 will not be recharged back to the land surface or subsurface of the Site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

D-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 decision document. The existing cover system is comprised of a minimum of 12 inches of clean soil, concrete or asphalt pavement. The demarcation layer, consisting of orange snow fencing material, white geotextile or equivalent material, etc. will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone (if present) that requires adherence to special conditions with respect to a particular use for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes 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 an updated SMP.

D-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site. A Request to Import/Reuse Fill or Soil form, which can be found at <http://www.dec.ny.gov/regulations/67386.html>, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

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

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed for the Site in NYSDEC DER-10 Appendix 5 Allowable Constituent for Imported Fill or Soil Commercial Use Criteria, and for the Affected Area of the Unither property to the south of the Area 2 ditch in NYSDEC DER-10 Appendix 5 Allowable Constituent for Imported Fill or Soil Unrestricted Use Criteria. 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.

D-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

D-12 EXCAVATION 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.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

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 will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

D-13 COMMUNITY AIR MONITORING PLAN

Community air monitoring will be performed according to the NYSDOH generic Community Air Monitoring Plan (CAMP). This plan requires real-time monitoring of VOCs and particulates at the upwind and downwind perimeter of designated work areas when certain activities are in progress. The location of air sampling stations will be based on generally prevailing wind conditions (upwind, and downwind). These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

The CAMP will contain monitoring threshold values established by the NYSDOH and provisions requiring that response actions are promptly implemented, if necessary, to reduce emissions at the work Site perimeter to levels deemed acceptable by NYSDOH and NYSDEC. The CAMP will include procedures to account for nuisance odors that may migrate off-site and negatively affect nearby receptors. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

D-14 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. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- 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.

APPENDIX E

Community Air Monitoring Plan

Appendix 1A

New York State Department of Health Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. 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 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.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 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 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 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 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should 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 must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. 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 must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix E

SUPPLEMENTAL COMMUNITY AIR MONITORING PLAN - SITE SPECIFIC REQUIREMENTS

This supplement to the New York State Department of Health Generic Community Air Monitoring Plan (CAMP) specifies instructions to be implemented upon detection of nuisance odors. The Site controls described below will be used to assist with odor mitigation to minimize, and to prevent where practicable, the migration of nuisance odors generated during work activities.

Site odor controls are intended to limit nuisance odors from work zone activities. If nuisance odors are identified within the work area and at potential downwind receptors, the following controls will be implemented:

Primary Odor Controls:

- Efforts will be made to minimize the amount of time that ambient air is exposed to odiferous material at the site. During excavation activities, polyethylene sheeting/tarps may be used to cover these soils to prevent or minimize fugitive odors.
- Soil stockpiles and excavations will be covered to the extent practical when they are not being actively generated.

Secondary Odor Controls:

- If moderate or strong odors remain after primary odor controls have been implemented, secondary control measures will be employed. Secondary controls may include agents like a suppressant foam that can be sprayed over impacted soil and that have been determined to be effective in controlling emissions. These agents may be used where tarps cannot be effectively deployed over the source material such as during active excavation and stockpiling, where tarps are ineffective in controlling odors, or in addition to tarps.
- Odor suppressant foam can provide immediate, localized control of odor emissions. The foam is made by the injection of air into a foam concentrate/water mixture using a Pneumatic Foam Unit (PFU). The foam is applied via a hose to cover source areas to a depth of 3 to 6 inches. Short-term foam (such as Rusmar AC-645) is recommended to control odor emissions from active excavations and stockpiles. It is shipped as a concentrate and diluted with water at the site. Under normal conditions this foam can last for between 12-17 hours. However, it has been observed to degrade quickly in direct sunlight, so frequent and liberal application to all areas that require odor control is advisable. For odor suppression needs, such as covered stockpiles, long-term foam should be used.

APPENDIX F

Quality Assurance Project Plan



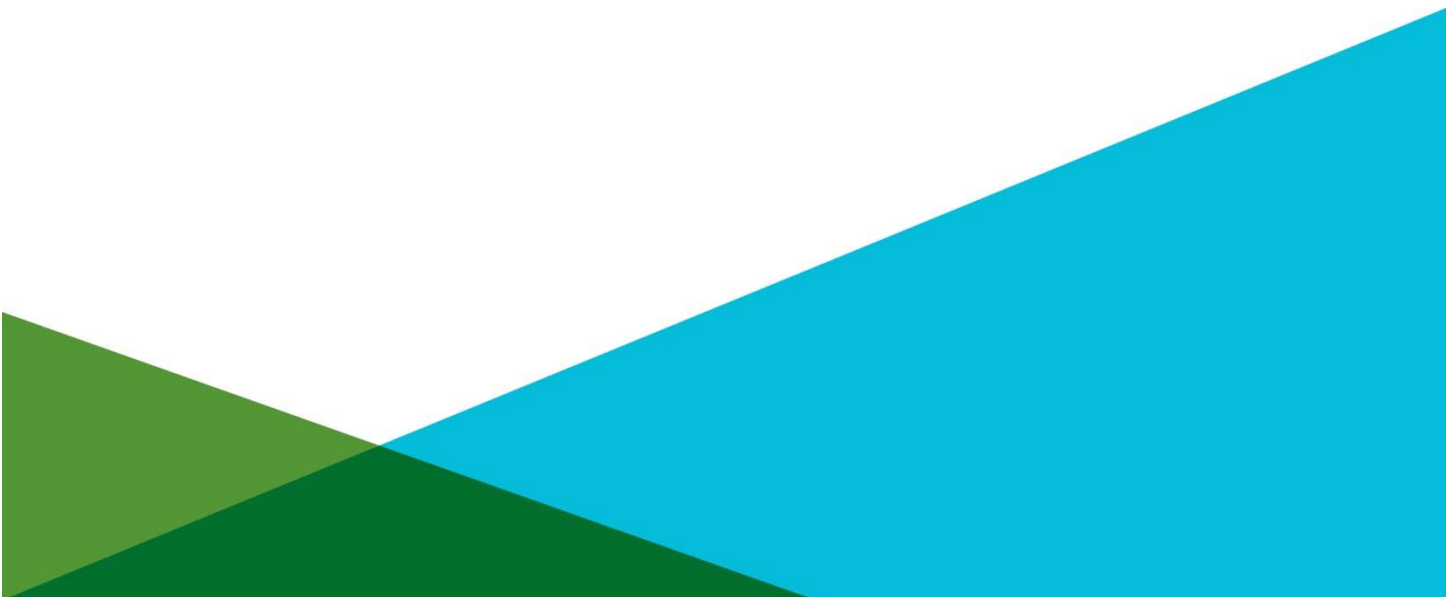
www.haleyaldrich.com

QUALITY ASSURANCE PROJECT PLAN
FORMER AB DICK FACILITY
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

by Haley & Aldrich of New York
Rochester, New York

for 811 Jefferson Road, LLC
Rochester, New York

File No. 128437-010
November 2017



Executive Summary

This Quality Assurance Project Plan (QAPP) outlines the scope of the quality assurance and quality control (QA/QC) activities associated with the site monitoring activities associated with the Site Management Plan (SMP) for the Former AB Dick Facility (Site) located at 811 Jefferson Road, Rochester, New York.

Protocols for sample collection, sample handling and storage, chain-of-custody procedures, and laboratory and field analyses are described herein or specifically referenced to related project documents.

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1. Project Description

This Quality Assurance Project Plan (QAPP) has been prepared on behalf of 811 Jefferson Road, LLC. The QAPP is a component of the Site Management Plan (SMP).

1.1 PROJECT OBJECTIVES

The primary objective for data collection activities is to collect sufficient data necessary to monitor the nature of any remaining groundwater, soil, or soil vapor impacts.

1.2 SITE DESCRIPTION AND HISTORY

The general Site description and site history is provided in Section 2 of the SMP and incorporated herein by reference.

1.3 LABORATORY PARAMETERS

Laboratory parameters are listed in Table I.

The laboratory parameters for the program groundwater monitoring wells includes all volatile organic compounds (VOCs) within the target compound list for EPA method 8260C including, trichloroethene (TCE), tetrachloroethene (PCE), 1,1 dichloroethene (1,1-DCE), cis-1,2 dichloroethene (cis-1,2-DCE), and vinyl chloride. Performance monitoring wells will be analyzed for dissolved and total Fe, total sulfate (SO_4^{2-}), total organic carbon (TOC), ethene, and chloride.

During the collection of groundwater samples, pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation/reduction potential (ORP) will be measured.

Laboratory parameters for soil samples may change and will be determined by the Excavation Work Plan. Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

Laboratory parameters for soil vapor, indoor air, and outdoor ambient air include volatile organic compounds.

1.4 SAMPLING LOCATIONS

The SMP provides the location of groundwater monitoring wells that will be sampled as a part of the sampling program. Soil, soil vapor, indoor air, and outdoor/ambient air sampling locations will be determined by the specific work plan for those media.

2. Project Organization and Responsibilities

This section defines the roles and responsibilities of the individuals who will perform the SMP monitoring activities. A NYSDOH certified analytical laboratory will perform the analyses of environmental samples collected at the Site.

2.1 MANAGEMENT RESPONSIBILITIES

The Project Manager is responsible for managing the implementation of the SMP monitoring and coordinating the collection of data. The Project Manager is responsible for technical quality control and project oversight. The Project Manager responsibilities include the following:

- Acquire and apply technical and corporate resources as needed to ensure performance within budget and schedule restraints;
- Review work performed to ensure quality, responsiveness, and timeliness;
- Communicate with the client point of contact concerning the progress of the monitoring activities;
- Assure corrective actions are taken for deficiencies cited during audits of SMP monitoring activities; and
- Overall Site health and safety plan compliance.

2.2 QUALITY ASSURANCE RESPONSIBILITIES

The Quality Assurance team will consist of a Quality Assurance Officer and the Data Validation staff. Quality Assurance responsibilities are described as follows:

Quality Assurance (QA) Officer

The QA Officer reports directly to the Project Manager and will be responsible for overseeing the review of field and laboratory data. Additional responsibilities include the following:

- Assure the application and effectiveness of the QAPP by the analytical laboratory and the project staff;
- Conduct internal audits of the SMP monitoring activities;
- Provide input to the Project Manager as to corrective actions that may be required as a result of the above-mentioned evaluations;
- Prepare and/or review data validation and audit reports.

The QA Officer will be assisted by the data validation staff in the evaluation and validation of field and laboratory generated data.

Data Validation Staff

The data validation staff will be independent of the laboratory and familiar with the analytical procedures performed. The validation will include a review of each validation criterion as prescribed by the guidelines presented in Section 9.2 of this document and be presented in a Data Usability Report (DUR) for submittal to the QA Officer.

2.3 LABORATORY RESPONSIBILITIES

Laboratory services in support of the SMP monitoring include the following personnel:

Laboratory Project Manager

The Laboratory Project Manager will report directly to the QA Officer and Project Manager, and will be responsible for ensuring all resources of the laboratory are available on an as-required basis. The Laboratory Project Manager will also be responsible for the approval of the final analytical reports.

Laboratory Operations Manager

The Laboratory Operations Manager will report to the Laboratory Project Manager and will be responsible for coordinating laboratory analysis, supervising in-house chain-of-custody reports, scheduling sample analyses, overseeing data review and overseeing preparation of analytical reports.

Laboratory QA Officer

The Laboratory QA Officer will have sole responsibility for review and validation of the analytical laboratory data. The Laboratory QA Officer will provide Case Narrative descriptions of any data quality issues encountered during the analyses conducted by the laboratory. The QA Officer will also define appropriate QA procedures, overview QA/QC documentation.

Laboratory Sample Custodian

The Laboratory Sample Custodian will report to the Laboratory Operations Manager and will be responsible for the following:

- Receive and inspect the incoming sample containers;
- Record the condition of the incoming sample containers;
- Sign appropriate documents;
- Verify chain-of-custody and its correctness;
- Notify the Project Manager and Operations Manager of sample receipt and inspection;
- Assign a unique identification number and enter each into the sample receiving log;
- Initiate transfer of samples to laboratory analytical sections; and
- Control and monitor access/storage of samples and extracts.

Laboratory Technical Personnel

The laboratory technical staff will have the primary responsibility in the performance of sample analysis and the execution of the QA procedures developed to determine the data quality. These activities will include the proper preparation and analysis of the project samples in accordance with the laboratory's Quality Assurance Manual (QAM) and associated Standard Operating Procedures (SOP).

2.4 FIELD RESPONSIBILITIES

Field Coordinator

The Field Coordinator is responsible for the overall operation of the field team and reports directly to the Project Manager. The Field Coordinator works with the project Health & Safety Officer (HSO) to conduct operations in compliance with the project Health & Safety Plan (HASP). The Field Coordinator will facilitate communication and coordinate efforts between the Project Manager and the field team members.

Other responsibilities include the following:

- Develop and implement field-related work plans, ensuring schedule compliance, and adhering to management-developed project requirements;
- Coordinate and manage field staff;
- Perform field system audits;
- Oversee quality control for technical data provided by the field staff;
- Prepare and approve text and graphics required for field team efforts;
- Coordinate and oversee technical efforts of subcontractors assisting the field team;
- Identify problems in the field; resolve difficulties in consultation with the Project QAO, and Project Manager; implement and document corrective action procedures and,
- Participate in preparation of the final reports.

Field Team Personnel

Field Team Personnel will be responsible for the following:

- Perform field activities as detailed in the SMP and in compliance with the Field Sampling Plan (FSP) and QAPP.
- Immediately report any accidents and/or unsafe conditions to the Site Health & Safety Officer and take reasonable precautions to prevent injury.

3. Sampling Procedures

The FSP provides the SOPs for sampling of each environmental media required by the SMP.

3.1 SAMPLE CONTAINERS

Sample containers for each sampling task will be provided by the laboratory performing the analysis. The containers will be cleaned by the manufacturer to meet or exceed the analyte specifications established in the U.S. EPA, "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers", April 1992, OSWER Directive #9240.0-0.5A. Certificates of analysis for each lot of sample containers used will be maintained by the laboratory.

The appropriate sample containers, preservation method, maximum holding times, and handling requirements for each sampling task are provided in Table II.

3.2 SAMPLE LABELING

Each sample will be labeled with a unique sample number that will facilitate tracking and cross-referencing of sample information:

- Employee ID-Day/Month/Year-Sample Time

Equipment rinse blank and field duplicate samples also will be numbered with a unique sample number to prevent analytical bias of field QC samples.

Refer to the FSP for the sample labeling procedures.

3.3 FIELD QC SAMPLE COLLECTION

3.3.1 Equipment Rinse Blank Sample Collection

Equipment rinse blank samples will be collected when non-dedicated sampling equipment is used to collect samples. Equipment rinse blanks consist of distilled water that has been routed through decontaminated sampling equipment and collected into the appropriate containers. The containers will be filled in order of decreasing analyte volatility (i.e., VOC first, SVOC second and followed by the containers for the remaining analyses).

3.3.2 Field Duplicate Sample Collection

3.3.2.1 Water Samples

Field duplicate samples will be collected by filling the first sample container to the proper level and sealing and then repeated for the second set of sample container.

1. The samples are properly labeled as specified in Section 3.2.
2. Steps 1 through 4 are repeated for the bottles for each analysis. The samples are collected in order of decreasing analyte volatility as detailed in Section 3.3.1.

3. Chain-of-custody documents are executed.
4. The samples will be handled as specified in Table II.

3.3.2.2 Soil Samples

Soil field duplicates will be collected as specified in the following procedure:

1. The split-spoon sampler or trowel will be retrieved from the sampling point.
2. Soil for VOC analysis will be removed from the sampling device as specified in the FSP.
3. Soil for non-VOC analysis will be removed from the sampling device and placed in a stainless-steel mixing bowl. The soil will be thoroughly homogenized using stainless steel utensils and the sample containers will be filled in order of decreasing analyte volatility.

3.3.2.3 Soil Vapor, Indoor Air, and Outdoor Ambient Air Samples

Field duplicate samples for soil vapor, indoor air, and outdoor ambient air will be collected as specified in the following procedure:

1. The samples are properly labeled as specified in Section 3.2.
2. Chain-of-custody documents are executed.
3. The samples will be handled as specified in Table II.

4. Custody Procedures

Sample custody is addressed in three parts: field sample collection, laboratory analysis and final project files. Custody of a sample begins when it is collected by or transferred to an individual and ends when that individual relinquishes or disposes of the sample.

A sample is under custody if:

1. The item is in actual possession of a person;
2. The item is in the view of the person after being in actual possession of the person;
3. The item was in actual possession and subsequently stored to prevent tampering; or
4. The item is in a designated and identified secure area.

4.1 FIELD CUSTODY PROCEDURES

Field personnel will keep written records of field activities on applicable preprinted field forms or in a bound field notebook to record data collecting activities. These records will be written legibly in ink and will contain pertinent field data and observations. Entry errors or changes will be crossed out with a single line, dated and initialed by the person making the correction. Field forms and notebooks will be periodically reviewed by the Field Coordinator.

The beginning of each entry in the logbook or preprinted field form will contain the following information:

- Date
- Start time
- Weather
- Names of field personnel (including subcontractors)
- Level of personal protection used at the Site
- Names of all visitors and the purpose of their visit.

For each measurement and sample collected, the following information will be recorded:

- Detailed description of sample location,
- Equipment used to collect sample or make measurement and the date equipment was calibrated,
- Time sample was collected,
- Description of the sample conditions,
- Depth sample was collected (if applicable),
- Volume and number of containers filled with the sample; and,
- Sampler's identification.

4.1.1 Field Procedures

The following procedure describes the process to maintain the integrity of the samples:

- Upon collection samples are placed in the proper containers. In general, samples collected for organic analysis will be placed in pre-cleaned glass containers and samples collected for inorganic analysis will be placed in pre-cleaned plastic (polyethylene) bottles. Refer to the FSP for sample packaging procedures.
- Samples will be assigned a unique sample number and will be affixed to a sample label. Refer to the FSP for sample labeling procedures.
- Samples will be properly and appropriately preserved by field personnel in order to minimize loss of the constituent(s) of interest due to physical, chemical or biological mechanisms.
- Appropriate volumes will be collected to ensure that the appropriate reporting limits can be successfully achieved and that the required QC sample analyses can be performed.

4.1.2 Transfer of Custody and Shipment Procedures

- A chain-of-custody (COC) record will be completed at the time of sample collection and will accompany each shipment of project samples to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until the samples are relinquished to the laboratory. Sample transfer will require the individuals relinquishing and receiving the samples to sign, date and note the time of sample transfer on the COC record.
- Samples will be shipped or delivered in a timely fashion to the laboratory so that holding-times and/or analysis times as prescribed by the methodology can be met.
- Samples will be transported in containers (coolers) which will maintain the refrigeration temperature for those parameters for which refrigeration is required in the prescribed preservation protocols.
- Samples will be placed in an upright position and limited to one layer of samples per cooler. Additional bubble wrap or packaging material will be added to fill the cooler. Shipping containers will be secured with strapping tape and custody tape for shipment to the laboratory.
- When samples are split with the NYSDEC representatives, a separate chain-of-custody will be prepared and marked to indicate with whom the samples are shared. The person relinquishing the samples will require the representative's signature acknowledging sample receipt.
- If samples are sent by a commercial carrier, a bill of lading will be used. A copy of the bill of lading will be retained as part of the permanent record. Commercial carriers will not sign the custody record as long as the custody record is sealed inside the sample cooler and the custody tape remains intact.
- Samples will be picked up by a laboratory courier or transported to the laboratory the same day they are collected unless collected on a weekend or holiday. In these cases, the samples will be

stored in a secure location until delivery to the laboratory. Additional ice will be added to the cooler as needed to maintain proper preservation temperatures.

4.2 LABORATORY CHAIN-OF-CUSTODY PROCEDURES

A sample custodian will be designated by the laboratory and will have the responsibility to receive all incoming samples. Once received, the custodian will document if the sample is received in good condition (i.e., unbroken, cooled, etc.) and that the associated paperwork, such as chain-of-custody forms have been completed. The custodian will sign the chain-of-custody forms.

The custodian will also document if sufficient sample volume has been received to complete the analytical program. The sample custodian will then place the samples into secure, limited access storage (refrigerated storage, if required). The sample custodian will assign a unique number to each incoming sample for use in the laboratory. The unique number will then be entered into the sample-receiving log with the verified time and date of receipt also noted.

Consistent with the analyses requested on the chain-of-custody form, analyses by the laboratory's analysts will begin in accordance with the appropriate methodologies. Samples will be removed from secure storage with internal chain-of-custody sign-out procedures followed.

4.3 STORAGE OF SAMPLES

Empty sample bottles will be returned to secure and limited access storage after the available volume has been consumed by the analysis. Upon completion of the entire analytical work effort, samples will be disposed of by the sample custodian. The length of time that samples are held will be at least thirty (30) days after reports have been submitted. Disposal of remaining samples will be completed in compliance with all Federal, State and local requirements.

4.4 FINAL PROJECT FILES CUSTODY PROCEDURES

The final project files will be the central repository for all documents with information relevant to sampling and analysis activities as described in this QAPP. The Haley & Aldrich Project Manager will be the custodian of the project file. The project files including all relevant records, reports, logs, field notebooks, pictures, subcontractor reports and data reviews will be maintained in a secured, limited access area and under custody of the Project Director or his designee.

The final project file will include the following:

- Project plans and drawings
- Field data records
- Sample identification documents and soil boring/monitoring well logs
- All chain-of-custody documentation
- Correspondence
- References, literature
- Laboratory data deliverables
- Data validation and assessment reports
- Progress reports, QA reports
- Final report

The laboratory will be responsible for maintaining analytical logbooks, laboratory data and sample chain of custody documents. Raw laboratory data files and copies of hard copy reports will be inventoried and maintained by the laboratory for a period of six (6) years at which time the laboratory will contact the Haley & Aldrich Project Manager regarding the disposition of the project related files.

5. Calibration Procedures and Frequency

5.1 FIELD INSTRUMENT CALIBRATION PROCEDURES

Several field instruments will be used for both on-site screening of samples and for health and safety monitoring, as described in the Health and Safety Plan (HASP). On-site air monitoring for health and safety purposes may be accomplished using several different organic vapor detection devices, such as a Photo-ionization Detector (PID), Combustible Gas Indicator (CGI), and/or Helium (He) detector.

Field instruments will be calibrated at the beginning of each day and checked during field activities to verify performance. Instrument specific calibration procedures will be performed in accordance with the instrument manufacturer's requirements.

5.2 LABORATORY INSTRUMENT CALIBRATION PROCEDURES

Reference materials of known purity and quality will be utilized for the analysis of environmental samples. The laboratory will carefully monitor the preparation and use of reference materials including solutions, standards and reagents through well-documented procedures.

All solid chemicals and acids/bases used by the laboratory will be rated as "reagent grade" or better. All gases will be "high" purity or better. All Standard Reference Materials (SRMs) or Performance Evaluation (PE) materials will be obtained from approved vendors of the National Institute of Standards and Technology (formerly National Bureau of Standards), the U.S. EPA Environmental Monitoring Support Laboratories (EMSL), or reliable Cooperative Research and Development Agreement (CRADA) certified commercial sources.

6. Analytical Procedures

Analytical procedures to be utilized for analysis of environmental samples will be based on referenced USEPA analytical protocols and/or project specific SOP.

6.1 FIELD ANALYTICAL PROCEDURES

Field analytical procedures include the measurement of pH, temperature, ORP, DO and specific conductivity during sampling of groundwater, and the qualitative measurement of Volatile Organic Compounds (VOC) during the collection of soil samples.

6.2 LABORATORY ANALYTICAL PROCEDURES

Laboratory analyses will be based on the U.S. EPA methodology requirements promulgated in:

- "Test Methods for Evaluating Solid Waste," SW-846 EPA, Office of Solid Waste, and promulgated updates, 1986.

6.2.1 List of Project Target Compounds and Laboratory Detection Limits

The laboratory reporting limits (RLs) and associated method detection limits (MDLs) for the target analytes and compounds for the environmental media to be analyzed are presented in Table II . MDLs have been experimentally determined by the project laboratory using the method provided in 40 CFR, Part 136 Appendix B.

Laboratory parameters for soil samples may change and will be determined by the Excavation Work Plan. Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

6.2.2 List of Method Specific Quality Control (QC) Criteria

The laboratory SOPs include a section that presents the minimum QC requirements for the project analyses. Section 7.0 references the frequency of the associated QC samples for each sampling effort and matrix.

7. Internal Quality Control Checks

This section presents the internal quality control checks that will be employed for field and laboratory measurements.

7.1 FIELD QUALITY CONTROL

7.1.1 Equipment Rinse Blanks

Internal quality control checks will include analysis of equipment blanks to validate successful equipment cleaning activities. Whenever possible, dedicated equipment will be employed to reduce the possibility of cross-contamination of samples.

The frequency of equipment rinse sample preparation will be for each type of sampling equipment on which decontamination procedures have been performed as part of each sampling event.

7.1.2 Trip Blanks

Trip blanks samples will be prepared by the project laboratory using ASTM Type II or equivalent water placed within pre-cleaned 40 milliliter (ml) VOC vials equipped with Teflon septa. Trip blanks will accompany each sample delivery group (SDG) of environmental samples collected for analysis of VOCs.

Trip blank samples will be placed in each cooler that stores and transports project samples that are to be analyzed for VOCs.

7.2 LABORATORY PROCEDURES

Procedures which contribute to maintenance of overall laboratory quality assurance and control include appropriately cleaned sample containers, proper sample identification and logging, applicable sample preservation, storage and analysis within prescribed holding times, and use of controlled materials.

7.2.1 Field Duplicate Samples

The precision or reproducibility of the data generated will be monitored through the use of field duplicate samples. Field duplicate analysis will be performed at a frequency of 1 in 20 project samples.

Precision will be measured in terms of the absolute value of the relative percent difference (RPD) as expressed by the following equation:

$$RPD = \frac{\left| \frac{R1 - R2}{(R1 + R2)} \right|}{2} \times 100\%$$

Acceptance criteria for duplicate analyses performed on solid matrices will be 100% and aqueous matrices will be 35%. RPD values outside these limits will require an evaluation of the sampling and/or

analysis procedures by the project QA Officer and/or laboratory QA Director. Corrective actions may include re-analysis of additional sample aliquots and/or qualification of the data for use.

7.2.2 Matrix Spike Samples

Ten percent of each project sample matrix for each analytical method performed will be spiked with known concentrations of the specific target compounds/analytes.

The amount of the compound recovered from the sample compared to the amount added will be expressed as a percent recovery. The percent recovery of an analyte is an indication of the accuracy of an analysis within the site-specific sample matrix. Percent recovery will be calculated for MS/MSD using the following equation.

$$\% Recovery = \frac{Spiked Sample - Background}{Known Value of Spike} \times 100\%$$

If the quality control value falls outside the control limits (UCL or LCL) due to sample matrix effects, the results will be reported with appropriate data qualifiers. To determine the effect a non-compliant MS recovery has on the reported results, the recovery data will be evaluated as part of the validation process.

7.2.3 Laboratory Control Sample (LCS) Analyses

The laboratory will perform LCS analyses prepared from Standard Reference Materials (SRMs). The SRMs will be supplied from an independent manufacturer and traceable to NIST materials with known concentrations of each target analyte to be determined by the analytical methods performed. In cases where an independently supplied SRM is not available, the LCS may be prepared by the laboratory from a reagent lot other than that used for instrument calibration.

The laboratory will evaluate LCS analyses in terms of percent recovery using the most recent laboratory generated control limits.

LCS recoveries that do not meet acceptance criteria will be deemed invalid. Analysis of project samples will cease until an acceptable LCS analysis has been performed. If sample analysis is performed in association with an out-of-control LCS sample analysis, the data will be deemed invalid.

Corrective actions will be initiated by the Haley & Aldrich QA Officer and/or Laboratory QA Officer to investigate the problem. After the problem has been identified and corrected, the solution will be noted in the instrument run logbook and re-analysis of project samples will be performed, if possible.

The analytical anomaly will be noted in the sample delivery group (SDG) Case Narrative and reviewed by the data validator. The data validator will confirm that appropriate corrective actions were implemented and recommend the applicable use of the affected data.

7.2.4 Surrogate Compound/Internal Standard Recoveries

For VOCs, surrogates will be added to each sample prior to analysis to establish purge and trap efficiency. Quantitation will be accomplished via internal standardization techniques.

The recovery of surrogate compounds and internal standards will be monitored by laboratory personnel to assess possible site-specific matrix effects on instrument performance.

For semi-volatile organics analyses, surrogates will be added to the raw sample to assess extraction efficiency. Internal standards will be added to all sample extracts and instrument calibration standard immediately before analysis for quantitation via internal standardization techniques.

Method specific quality control (QC) limits are provided in the attached laboratory method SOPs. Surrogate compound/internal standard recoveries that do not fall within accepted QC limits for the analytical methodology performed will have the analytical results flagged with data qualifiers as appropriate by the laboratory and will not be noted in the laboratory report Case Narrative.

To ascertain the effect non-compliant surrogate compound/internal standard recoveries may have on the reported results, the recovery data will be evaluated as part of the validation process. The data validator will provide recommendations for corrective actions including but not limited to additional data qualification.

7.2.5 Calibration Verification Standards

Calibration verification (CV) standards will be utilized to confirm instrument calibrations and performance throughout the analytical process. CV standards will be prepared as prescribed by the respective analytical protocols. Continuing calibration will be verified by compliance with method-specific criteria prior to additional analysis of project samples.

Non-compliant analysis of CV standards will require immediate corrective action by the project laboratory QA officer and/or designated personnel. Corrective action may include re-analysis of each affected project sample, a detailed description of the problem, the corrective action undertaken, the person who performed the action, and the resolution of the problem.

7.2.6 Laboratory Method Blank Analyses

Method blank sample analysis will be performed as part of each analytical batch for each methodology performed. If target compounds are detected in the method blank samples, the reported results will be flagged by the laboratory in accordance with standard operating procedures. The data validator will provide recommendations for corrective actions including but not limited to additional data qualification.

8. Data Quality Objectives

Sampling that will be performed as described in the SMP are designed to produce data of the quality necessary to achieve the minimum standard requirements of the field and laboratory analytical procedures described below. These data are being obtained with the primary objective to assess levels of COCs associated with the Site.

The overall project data quality objective (DQO) is to implement procedures for field data collection, sample collection, handling, and laboratory analysis and reporting that achieve the project objectives. The following section is a general discussion of the criteria that will be used to measure the project DQO.

8.1 PRECISION

8.1.1 Definition

Precision is defined as a quantitative measure of the degree to which two or more measurements are in agreement. Precision will be determined by collecting and analyzing field duplicate samples and by creating and analyzing laboratory duplicates from one or more of the field samples. The overall precision of measurement data is a mixture of sampling and analytical factors. The analytical results from the field duplicate samples will provide data on sampling precision. The results from duplicate samples created by the laboratory will provide data on analytical precision. The measurement of precision will be stated in terms of relative percent difference (RPD).

8.1.2 Field Precision Sample Objectives

Field precision will be assessed through collection and measurement of field duplicate samples at a rate of 1 duplicate per 20 investigative samples. The RPD criteria for the project field duplicate samples will be +/- 100% for soil, +/- 35 % for groundwater for parameters of analysis detected at concentrations greater than 5 times (5X) the laboratory reporting limit (RL).

8.1.3 Laboratory Precision Sample Objectives

Laboratory precision will be assessed through the analysis of laboratory control and laboratory control duplicate samples (LCS/LCSD) and matrix spike and matrix spike duplicate (MS/MSD) samples for groundwater and soil samples and the analysis of laboratory duplicate samples for air and soil vapor samples. Air and soil vapor laboratory duplicate sample analyses will be performed by analyzing the same SUMMA canister twice. The RPD criteria for the air/soil vapor laboratory duplicate samples will be +/- 35 % for parameters of analysis detected at concentrations greater than 5 times (5X) the laboratory reporting limit (RL).

8.2 ACCURACY

8.2.1 Definition

Accuracy relates to the bias in a measurement system. Bias is the difference between the observed and the "true" value. Sources of error are the sampling process, field contamination, preservation techniques, sample handling, sample matrix, sample preparation and analytical procedure limitations.

8.2.2 Field Accuracy Objectives

Sampling bias will be assessed by evaluating the results of field equipment rinse and trip blanks. Equipment rinse and trip blanks will be collected as appropriate based on sampling and analytical methods for each sampling effort.

If non-dedicated sampling equipment is used, equipment rinse blanks will be collected by passing ASTM Type II water over and/or through the respective sampling equipment utilized during each sampling effort. One equipment rinse blank will be collected for each type of non-dedicated sampling equipment used for the sampling effort. Equipment rinse blanks will be analyzed for each target parameter for the respective sampling effort for which environmental media have been collected. (Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.)

Trip blank samples will be prepared by the laboratory and provided with each shipping container that includes containers for the collection of groundwater samples for the analysis of VOC. Trip blank samples will be analyzed for each VOC for which groundwater samples have been collected for analysis

8.3 LABORATORY ACCURACY OBJECTIVES

Analytical bias will be assessed through the use of laboratory control samples (LCS) and Site-specific matrix spike (MS) sample analyses. LCS analyses will be performed with each analytical batch of project samples to determine the accuracy of the analytical system.

One (1) set of MS/MSD analyses will be performed with each batch of twenty (20) project samples collected for analysis to assess the accuracy of the identification and quantification of analytes within the Site-specific sample matrices. Additional sample volume will be collected at sample locations selected for the preparation of MS/MSD samples so that the standard laboratory reporting limits (RLs) are achieved.

The accuracy of analyses that include a sample extraction procedure will be evaluated through the use of system monitoring or surrogate compounds. Surrogate compounds will be added to each sample, standard, blank, and QC sample prior to sample preparation and analysis. Surrogate compound percent recoveries will provide information on the effect of the sample matrix on the accuracy of the analyses.

8.4 REPRESENTATIVENESS

8.4.1 Definition

Representativeness expresses the degree to which sample data represent a characteristic of a population, a parameter variation at a sampling point or an environmental condition. Representativeness is a qualitative parameter that is dependent upon the design of the sampling program. The representativeness criterion is satisfied through the proper selection of sampling locations, the quantity of samples and the use of appropriate procedures to collect and analyze the samples.

8.4.2 Measures to Ensure Representativeness of Field Data

Representativeness will be addressed by prescribing sampling techniques and the rationale used to select sampling locations. Sampling locations may be biased (based on existing data, instrument surveys, observations, etc.) or unbiased (completely random or stratified-random approaches).

8.4.3 Measures to Ensure Representativeness of Laboratory Data

Representativeness will be addressed by prescribing sampling techniques and the rationale used to select sampling locations. Sampling locations may be biased (based on existing data, instrument surveys, observations, etc.) or unbiased (completely random or stratified-random approaches).

8.5 COMPLETENESS

8.5.1 Definition

Completeness is a measure of the amount of valid (usable) data obtained from a measuring system compared to the total amount of the anticipated to be obtained. The completeness goal for all data uses is that a sufficient amount of valid data be generated so that determinations can be made related to the intended data use with a sufficient degree of confidence.

8.5.2 Field Completeness Objectives

Completeness is a measure of the amount of valid measurements obtained from measurements taken in this project versus the number planned. Field completeness objective for this project will be greater than (>) 90%.

8.5.3 Laboratory Completeness Objectives

Laboratory data completeness objective is a measure of the amount of valid data obtained from laboratory measurements. The evaluation of the data completeness will be performed at the conclusion of each sampling and analysis effort.

The completeness of the data generated will be determined by comparing the amount of valid data, based on independent validation, with the total laboratory data set. The completeness goal will be >90%.

8.6 COMPARABILITY

8.6.1 Definition

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another.

8.6.2 Measures to Ensure Comparability of Laboratory Data

Comparability of laboratory data will be measured from the analysis of Standard Reference Materials (SRM) obtained from either EPA Cooperative Research and Development Agreement (CRADA) suppliers

or the National Institute of Standards and Technology (NIST). The reported analytical data will also be presented in standard units of mass of contaminant within a known volume of environmental media. The standard units for various sample matrices are as follows:

- Solid Matrices – mg/kg of media (Dry Weight).
- Aqueous Matrices – ug/L of media for organic analyses, and mg/L for inorganic analyses.

8.7 LEVEL OF QUALITY CONTROL EFFORT

Equipment rinse blanks for non-dedicated sampling equipment will be prepared by field personnel and submitted for analysis of target parameters. Equipment rinse blank samples will be analyzed to check for potential cross-contamination between sampling locations that may be introduced during the investigation. One (1) equipment rinse blank will be collected per sampling event to the extent that non-dedicated sampling equipment is used.

Trip blanks will be used to assess the potential for contamination during sample storage and shipment. Trip blanks will be provided with the sample containers to be used for the collection of groundwater samples for the analysis of VOC. Trip blanks will be preserved and handled in the same manner as the project samples. One (1) trip blank will be included along with each shipping container containing project samples to be analyzed for VOC.

Method blank samples will be prepared by the laboratory and analyzed concurrently with all project samples to assess potential contamination introduced during the analytical process.

Field duplicate samples will be collected and analyzed to determine sampling and analytical reproducibility. One (1) field duplicate will be collected for every 20 or fewer investigative samples collected for off-Site laboratory analysis.

Matrix spikes will provide information to assess the precision and accuracy of the analysis of the target parameters within the environmental media collected. One (1) matrix spike/matrix spike duplicate (MS/MSD) will be collected for every 20 or fewer investigative samples per sample matrix.

(Note: Soil MS/MSD samples require triple sample volume for VOC only. Aqueous MS/MSD samples require triple the normal sample volume for VOC analysis and double the volume for the remaining parameters.)

9. Data Reduction, Validation and Reporting

Data generated by the laboratory operation will be reduced and validated prior to reporting in accordance with the following procedures:

9.1 DATA REDUCTION

9.1.1 Field Data Reduction Procedures

Field data reduction procedures will be minimal in scope compared to those implemented in the laboratory setting. The pH, conductivity, temperature, turbidity, DO, ORP and breathing zone VOC readings collected in the field will be generated from direct read instruments. The data will be written into field logbooks immediately after measurements are taken. If errors are made, data will be legibly crossed out, initialed and dated by the field member, and corrected in a space adjacent to the original entry.

9.1.2 Laboratory Data Reduction Procedures

Laboratory data reduction procedures are provided by the appropriate chapter of USEPA, "Test Methods for Evaluating Solid Waste", SW-846, Third Edition. Errors will be noted; corrections made with the original notations crossed out legibly. Analytical results for soil samples will be calculated and reported on a dry weight basis.

9.1.3 Quality Control Data

Quality control data (e.g., laboratory duplicates, surrogates, matrix spikes, and matrix spike duplicates) will be compared to the method acceptance criteria. Data determined to be acceptable will be entered into the laboratory information management system.

Unacceptable data will be appropriately qualified in the project report. Case narratives will be prepared which will include information concerning data that fell outside acceptance limits and any other anomalous conditions encountered during sample analysis.

9.2 DATA VALIDATION

Data validation procedures of the analytical data will be performed by the Haley & Aldrich QA Officer or designee using the following documents as guidance for the review process:

- "U.S. EPA National Functional Guidelines for Organic Data Review", and the "U.S. EPA National Functional Guidelines for Inorganic Data Review".
- The specific data qualifiers used will be applied to the reported results as presented and defined in the EPA National Functional Guidelines. Validation will be performed by qualified personnel at the direction of the Haley & Aldrich QAO.
- The completeness of each data package will be evaluated by the Data Validator. Completeness checks will be administered on all data to determine that the deliverables are consistent with

the NYSDEC Analytical Services Protocol (ASP) Category A and Category B data package requirements. The validator will determine whether the required items are present and request copies of missing deliverables (if necessary) from the laboratory.

9.3 DATA REPORTING

Data reporting procedures will be carried out for field and laboratory operations as indicated below:

- **Field Data Reporting:** Field data reporting will be conducted principally through the transmission of report sheets containing tabulated results of measurements made in the field and documentation of field calibration activities.
- **Laboratory Data Reporting:** The laboratory data reporting package will enable data validation based on the protocols described above. The final laboratory data report format will include the QA/QC sample analysis deliverables to enable the development of a data usability summary report (DUSR) based on Department DER-10 Appendix 2B.

10. Performance and System Audits

A performance audit is an independent quantitative comparison with data routinely obtained in the field or the laboratory. Performance audits include two separate, independent parts: internal and external audits.

10.1 FIELD PERFORMANCE AND SYSTEM AUDITS

10.1.1 Internal Field Audit Responsibilities

Internal audits of field activities will be initiated at the discretion of the Project Manager and will include the review of sampling and field measurements. The audits will verify that all procedures are being followed. Internal field audits will be conducted periodically during the project. The audits will include examination of the following:

- Field sampling records, screening results, instrument operating records
- Sample collection
- Handling and packaging in compliance with procedures
- Maintenance of QA procedures
- Chain-of-custody reports

10.1.2 External Field Audit Responsibilities

External audits may be conducted by the Project Coordinator at any time during the field operations. These audits may or may not be announced and are at the discretion of the NYSDEC. The external field audits can include (but are not limited to) the following:

- Sampling equipment decontamination procedures
- Sample bottle preparation procedures
- Sampling procedures
- Examination of health and safety plans
- Procedures for verification of field duplicates
- Field screening practices

10.2 LABORATORY PERFORMANCE AND SYSTEM AUDITS

10.2.1 Internal Laboratory Audit Responsibilities

The laboratory system audits are typically conducted by the laboratory QA Officer or designee on an annual basis. The system audit will include an examination of laboratory documentation including: sample receiving logs, sample storage, chain-of-custody procedures, sample preparation and analysis and instrument operating records.

At the conclusion of internal system audits, reports will be provided to the laboratory's operating divisions for appropriate comment and remedial/corrective action where necessary. Records of audits and corrective actions will be maintained by the Laboratory QA Officer.

10.2.2 External Laboratory Audit Responsibilities

External audits will be conducted as required, by the NYSDOH or designee. External audits may include any of the following:

- Review of laboratory analytical procedures
- Laboratory on-site visits
- Submission of performance evaluation samples for analysis

Failure of any of the above audit procedures can lead to laboratory de-certification. An audit may consist of but not limited to:

- Sample receipt procedures
- Custody, sample security and log-in procedures
- Review of instrument calibration logs
- Review of QA procedures
- Review of log books
- Review of analytical SOPs
- Personnel interviews

A review of a data package from samples recently analyzed by the laboratory can include (but not be limited to) the following:

- Comparison of resulting data to the SOP or method
- Verification of initial and continuing calibrations within control limits
- Verification of surrogate recoveries and instrument timing results
- Review of extended quantitation reports for comparisons of library spectra to instrument spectra, where applicable
- Assurance that samples are run within holding times

11. Preventive Maintenance

11.1 FIELD INSTRUMENT PREVENTIVE MAINTENANCE

The field equipment preventive maintenance program is designed to ensure the effective completion of the sampling effort and to minimize equipment down time. Program implementation is concentrated in three areas:

- Maintenance responsibilities.
- Maintenance schedules.
- Inventory of critical spare parts and equipment.

The maintenance responsibilities for field equipment will be assigned to the task leaders in charge of specific field operations. Field personnel will be responsible for daily field checks and calibrations and for reporting any problems with the equipment. The maintenance schedule will follow the manufacturer's recommendations. In addition, the field personnel will be responsible for determining that an inventory of spare parts will be maintained with the field equipment. The inventory will primarily contain parts that are subject to frequent failure, have limited useful lifetimes and/or cannot be obtained in a timely manner.

11.2 LABORATORY INSTRUMENT PREVENTIVE MAINTENANCE

Analytical instruments at the laboratory will undergo routine and/or preventive maintenance. The extent of the preventive maintenance will be a function of the complexity of the equipment.

Generally, annual preventive maintenance service will involve cleaning, adjusting, inspecting and testing procedures designed to deduce instrument failure and/or extend useful instrument life. Between visits, routine operator maintenance and cleaning will be performed according to manufacturer's specifications by laboratory personnel.

Maintenance records will be placed on file at the laboratory and can be made available upon request.

12. Specific Routine Procedures Used to Assess Data Precision, Accuracy, and Completeness

12.1 FIELD MEASUREMENTS

Field generated information will be reviewed by the Field Coordinator and typically include evaluation of bound logbooks/forms, data entry and calculation checks. Field data will be assessed by the Project Coordinator who will review the field results for compliance with the established QC criteria that are specified in Section 7.0 of this QAPP. The accuracy of pH and specific conductance will be assessed using daily instrument calibration, calibration check, and blank data. Accuracy will be measured by determining the percent recovery (% R) of calibration check standards. Precision of the pH and specific conductance measurements will be assessed on the basis of the reproducibility of duplicate readings of a field sample and will be measured by determining the relative percent difference (RPD). Accuracy and precision of the soil VOC screening will be determined using duplicate readings of calibration checks. Field data completeness will be calculated using the following equation:

$$\text{Completeness} = \frac{\text{Valid (usable) Data Obtained}}{\text{Total Data Planned}} \times 100$$

12.2 LABORATORY DATA

Surrogate, internal standard and matrix spike recoveries will be used to evaluate data quality. The laboratory quality assurance/quality control program will include the following elements:

- Precision, in terms of relative percent difference (RPD), will be determined by relative sample analysis at a frequency of one duplicate analysis for each batch of ten project samples or a frequency of 10 percent (10%). RPD is defined as the absolute difference of duplicate measurements divided by the mean of these analyses normalized to percentage.
- Accuracy, in terms of percent recovery (recovery of known constituent additions or surrogate recoveries), will be determined by the analysis of spiked and unspiked samples. MS/MSD will be used to determine analytical accuracy. The frequency of MS/MSD analyses will be one project sample MS/MSD per set of 20 project samples.
- One method blank will be prepared and analyzed with each batch of project samples. The total number of method blank sample analyses will be determined by the laboratory analytical batch size.
- Standard Reference Materials (SRMs) will be used for each analysis. Sources of SRM's include the U.S. EPA, commercially available material from CRADA certified vendors and/or laboratory produced solutions. SRMs, when available and appropriate, will be processed and analyzed on a frequency of one per set of samples.
- Completeness is the evaluation of the amount of valid data generated versus the total set of data produced from a particular sampling and analysis event. Valid data is determined by independent confirmation of compliance with method-specific and project-specific data quality

objectives. The calculation of data set completeness will be performed by the following equation.

$$\frac{\text{Number of Valid Sample Results}}{\text{Total Number of Samples Planned}} \times 100 = \% \text{ Complete}$$

13. Quality Assurance (QA) Reports

Critically important to the successful implementation of the QA Plan is a reporting system that provides the means by which the program can be reviewed, problems identified and programmatic changes made to improve the plan.

QA reports to management include:

- Audit reports, internal and external audits with responses
- Performance evaluation sample results; internal and external sources
- Daily QA/QC exception reports/corrective actions

QA/QC corrective action reports will be prepared by the Haley & Aldrich QA Officer when appropriate and presented to the project and/or laboratory management personnel so that performance criteria can be monitored for all analyses from each analytical department. The updated trend/QA charts prepared by the laboratory QA personnel will be distributed and reviewed by various levels of the laboratory management.

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3. United States Environmental Protection Agency, (1993). Data Quality Objectives Process for Superfund Interim Final Guidance. U.S. EPA/540/R-93-071, Office of Solid Waste and Emergency Response (OSWER), September 1993.
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TABLES

TABLE I
ANALYTE DETECTION LIMITS IN GROUNDWATER AND SOIL
 BCP Site # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
GROUNDWATER				
Wet Chemistry				
Chloride	16887-00-6	mg/l	0.2	1
Total Organic Carbon	7440-44-0	mg/l	0.5	0.114
Sulfate	14808-79-8	mg/l	10	1.37
Volatile Organic Compounds (8260C)				
Methylene chloride	75-09-2	ug/l	0.7	2.5
1,1-Dichloroethane	75-34-3	ug/l	0.7	2.5
Chloroform	67-66-3	ug/l	0.7	2.5
Carbon tetrachloride	56-23-5	ug/l	0.134	0.5
1,2-Dichloropropane	78-87-5	ug/l	0.137	1
Dibromochloromethane	124-48-1	ug/l	0.149	0.5
1,1,2-Trichloroethane	79-00-5	ug/l	0.5	1.5
Tetrachloroethene	127-18-4	ug/l	0.181	0.5
Chlorobenzene	108-90-7	ug/l	0.7	2.5
Trichlorofluoromethane	75-69-4	ug/l	0.7	2.5
1,2-Dichloroethane	107-06-2	ug/l	0.132	0.5
1,1,1-Trichloroethane	71-55-6	ug/l	0.7	2.5
Bromodichloromethane	75-27-4	ug/l	0.192	0.5
trans-1,3-Dichloropropene	10061-02-6	ug/l	0.164	0.5
cis-1,3-Dichloropropene	10061-01-5	ug/l	0.144	0.5
1,3-Dichloropropene, Total	542-75-6	ug/l	0.144	0.5
Bromoform	75-25-2	ug/l	0.65	2
1,1,2,2-Tetrachloroethane	79-34-5	ug/l	0.167	0.5
Benzene	71-43-2	ug/l	0.159	0.5
Toluene	108-88-3	ug/l	0.7	2.5
Ethylbenzene	100-41-4	ug/l	0.7	2.5
Chloromethane	74-87-3	ug/l	0.7	2.5
Bromomethane	74-83-9	ug/l	0.7	2.5
Vinyl chloride	75-01-4	ug/l	0.0714	1
Chloroethane	75-00-3	ug/l	0.7	2.5
1,1-Dichloroethene	75-35-4	ug/l	0.169	0.5
trans-1,2-Dichloroethene	156-60-5	ug/l	0.7	2.5
Trichloroethene	79-01-6	ug/l	0.175	0.5
1,2-Dichlorobenzene	95-50-1	ug/l	0.7	2.5
1,3-Dichlorobenzene	541-73-1	ug/l	0.7	2.5
1,4-Dichlorobenzene	106-46-7	ug/l	0.7	2.5
Methyl tert butyl ether	1634-04-4	ug/l	0.7	2.5
p/m-Xylene	179601-23-1	ug/l	0.7	2.5
o-Xylene	95-47-6	ug/l	0.7	2.5
Xylene (Total)	1330-20-7	ug/l	0.7	2.5
cis-1,2-Dichloroethene	156-59-2	ug/l	0.7	2.5
1,2-Dichloroethene (total)	540-59-0	ug/l	0.7	2.5
Styrene	100-42-5	ug/l	0.7	2.5
Dichlorodifluoromethane	75-71-8	ug/l	1	5
Acetone	67-64-1	ug/l	1.46	5
Carbon disulfide	75-15-0	ug/l	1	5
2-Butanone	78-93-3	ug/l	1.94	5
4-Methyl-2-pentanone	108-10-1	ug/l	1	5
2-Hexanone	591-78-6	ug/l	1	5
Bromochloromethane	74-97-5	ug/l	0.7	2.5
1,2-Dibromoethane	106-93-4	ug/l	0.65	2
n-Butylbenzene	104-51-8	ug/l	0.7	2.5
sec-Butylbenzene	135-98-8	ug/l	0.7	2.5

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Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
tert-Butylbenzene	98-06-6	ug/l	0.7	2.5
1,2-Dibromo-3-chloropropane	96-12-8	ug/l	0.7	2.5
Isopropylbenzene	98-82-8	ug/l	0.7	2.5
p-Isopropyltoluene	99-87-6	ug/l	0.7	2.5
Naphthalene	91-20-3	ug/l	0.7	2.5
n-Propylbenzene	103-65-1	ug/l	0.7	2.5
1,2,3-Trichlorobenzene	87-61-6	ug/l	0.7	2.5
1,2,4-Trichlorobenzene	120-82-1	ug/l	0.7	2.5
1,3,5-Trimethylbenzene	108-67-8	ug/l	0.7	2.5
1,2,4-Trimethylbenzene	95-63-6	ug/l	0.7	2.5
Methyl Acetate	79-20-9	ug/l	0.234	2
Cyclohexane	110-82-7	ug/l	0.271	10
1,4-Dioxane	123-91-1	ug/l	60.8	250
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	ug/l	0.7	2.5
Methyl cyclohexane	108-87-2	ug/l	0.396	10
Inorganics (6010)				
Iron, Total	7439-89-6	mg/l	0.05	0.0191
Iron, Dissolved	7439-89-6	mg/l	0.05	0.0191
Dissolved Gases (5310C)				
Ethene	74-85-1	mg/l	0.5	0.5
SOIL				
Wet Chemistry				
Chromium, Hexavalent (Method EPA 7199 SW-846)	18540-29-9	mg/kg	0.16	0.8
Chromium, Trivalent	16065-83-1	mg/kg	0.8	NA
Cyanide, Total (Method SM 4500)	57-12-5	mg/kg	1	0.212
Volatile Organic Compounds (8260C)				
Methylene chloride	75-09-2	ug/kg	1.65	10
1,1-Dichloroethane	75-34-3	ug/kg	0.27	1.5
Chloroform	67-66-3	ug/kg	0.37	1.5
Carbon tetrachloride	56-23-5	ug/kg	0.345	1
1,2-Dichloropropane	78-87-5	ug/kg	0.228	3.5
Dibromochloromethane	124-48-1	ug/kg	0.176	1
1,1,2-Trichloroethane	79-00-5	ug/kg	0.313	1.5
Tetrachloroethene	127-18-4	ug/kg	0.302	1
Chlorobenzene	108-90-7	ug/kg	0.348	1
Trichlorofluoromethane	75-69-4	ug/kg	0.417	5
1,2-Dichloroethane	107-06-2	ug/kg	0.246	1
1,1,1-Trichloroethane	71-55-6	ug/kg	0.35	1
Bromodichloromethane	75-27-4	ug/kg	0.308	1
trans-1,3-Dichloropropene	10061-02-6	ug/kg	0.208	1
cis-1,3-Dichloropropene	10061-01-5	ug/kg	0.231	1
1,3-Dichloropropene, Total	542-75-6	ug/kg	0.208	1
1,1-Dichloropropene	563-58-6	ug/kg	0.328	5
Bromoform	75-25-2	ug/kg	0.237	4
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	0.298	1
Benzene	71-43-2	ug/kg	0.193	1
Toluene	108-88-3	ug/kg	0.195	1.5
Ethylbenzene	100-41-4	ug/kg	0.17	1
Chloromethane	74-87-3	ug/kg	0.436	5
Bromomethane	74-83-9	ug/kg	0.338	2
Vinyl chloride	75-01-4	ug/kg	0.315	2
Chloroethane	75-00-3	ug/kg	0.316	2
1,1-Dichloroethene	75-35-4	ug/kg	0.372	1
trans-1,2-Dichloroethene	156-60-5	ug/kg	0.241	1.5

TABLE I
ANALYTE DETECTION LIMITS IN GROUNDWATER AND SOIL
 BCP Site # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
Trichloroethene	79-01-6	ug/kg	0.302	1
1,2-Dichlorobenzene	95-50-1	ug/kg	0.182	5
1,3-Dichlorobenzene	541-73-1	ug/kg	0.218	5
1,4-Dichlorobenzene	106-46-7	ug/kg	0.182	5
Methyl tert butyl ether	1634-04-4	ug/kg	0.153	2
p/m-Xylene	179601-23-1	ug/kg	0.351	2
o-Xylene	95-47-6	ug/kg	0.338	2
Xylene (Total)	1330-20-7	ug/kg	0.338	2
cis-1,2-Dichloroethene	156-59-2	ug/kg	0.342	1
1,2-Dichloroethene (total)	540-59-0	ug/kg	0.241	1
Dibromomethane	74-95-3	ug/kg	0.239	10
Styrene	100-42-5	ug/kg	0.401	2
Dichlorodifluoromethane	75-71-8	ug/kg	0.5	10
Acetone	67-64-1	ug/kg	2.29	10
Carbon disulfide	75-15-0	ug/kg	1.1	10
2-Butanone	78-93-3	ug/kg	0.69	10
Vinyl acetate	108-05-4	ug/kg	0.153	10
4-Methyl-2-pentanone	108-10-1	ug/kg	0.244	10
1,2,3-Trichloropropane	96-18-4	ug/kg	0.177	10
2-Hexanone	591-78-6	ug/kg	0.666	10
Bromochloromethane	74-97-5	ug/kg	0.357	5
2,2-Dichloropropane	594-20-7	ug/kg	0.45	5
1,2-Dibromoethane	106-93-4	ug/kg	0.199	4
1,3-Dichloropropane	142-28-9	ug/kg	0.183	5
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	0.318	1
Bromobenzene	108-86-1	ug/kg	0.219	5
n-Butylbenzene	104-51-8	ug/kg	0.228	1
sec-Butylbenzene	135-98-8	ug/kg	0.217	1
tert-Butylbenzene	98-06-6	ug/kg	0.247	5
o-Chlorotoluene	95-49-8	ug/kg	0.221	5
p-Chlorotoluene	106-43-4	ug/kg	0.183	5
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	0.396	5
Hexachlorobutadiene	87-68-3	ug/kg	0.348	5
Isopropylbenzene	98-82-8	ug/kg	0.194	1
p-Isopropyltoluene	99-87-6	ug/kg	0.202	1
Naphthalene	91-20-3	ug/kg	0.138	5
Acrylonitrile	107-13-1	ug/kg	0.514	10
n-Propylbenzene	103-65-1	ug/kg	0.215	1
1,2,3-Trichlorobenzene	87-61-6	ug/kg	0.251	5
1,2,4-Trichlorobenzene	120-82-1	ug/kg	0.215	5
1,3,5-Trimethylbenzene	108-67-8	ug/kg	0.161	5
1,2,4-Trimethylbenzene	95-63-6	ug/kg	0.186	5
1,4-Dioxane	123-91-1	ug/kg	14.4	40
1,4-Diethylbenzene	105-05-5	ug/kg	4	4
4-Ethyltoluene	622-96-8	ug/kg	0.234	4
1,2,4,5-Tetramethylbenzene	95-93-2	ug/kg	0.156	4
Ethyl ether	60-29-7	ug/kg	0.26	5
trans-1,4-Dichloro-2-butene	110-57-6	ug/kg	0.392	5
Semivolatile Organic Compounds (8270D)				
Acenaphthene	83-32-9	ug/kg	17.3012	133.6
1,2,4-Trichlorobenzene	120-82-1	ug/kg	19.1048	167
Hexachlorobenzene	118-74-1	ug/kg	18.704	100.2
Bis(2-chloroethyl)ether	111-44-4	ug/kg	22.6452	150.3
2-Chloronaphthalene	91-58-7	ug/kg	16.5664	167
1,2-Dichlorobenzene	95-50-1	ug/kg	29.9932	167
1,3-Dichlorobenzene	541-73-1	ug/kg	28.724	167

TABLE I
ANALYTE DETECTION LIMITS IN GROUNDWATER AND SOIL
 BCP Site # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
1,4-Dichlorobenzene	106-46-7	ug/kg	29.1582	167
3,3'-Dichlorobenzidine	91-94-1	ug/kg	44.422	167
2,4-Dinitrotoluene	121-14-2	ug/kg	33.4	167
2,6-Dinitrotoluene	606-20-2	ug/kg	28.6572	167
Fluoranthene	206-44-0	ug/kg	19.1716	100.2
4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	17.869	167
4-Bromophenyl phenyl ether	101-55-3	ug/kg	25.4842	167
Bis(2-chloroisopropyl)ether	108-60-1	ug/kg	28.5236	200.4
Bis(2-chloroethoxy)methane	111-91-1	ug/kg	16.7334	180.36
Hexachlorobutadiene	87-68-3	ug/kg	24.4488	167
Hexachlorocyclopentadiene	77-47-4	ug/kg	151.302	477.62
Hexachloroethane	67-72-1	ug/kg	27.0206	133.6
Isophorone	78-59-1	ug/kg	21.6766	150.3
Naphthalene	91-20-3	ug/kg	20.3406	167
Nitrobenzene	98-95-3	ug/kg	24.716	150.3
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	ug/kg	19.0046	133.6
n-Nitrosodi-n-propylamine	621-64-7	ug/kg	25.7848	167
Bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	57.782	167
Butyl benzyl phthalate	85-68-7	ug/kg	42.084	167
Di-n-butylphthalate	84-74-2	ug/kg	31.6632	167
Di-n-octylphthalate	117-84-0	ug/kg	56.78	167
Diethyl phthalate	84-66-2	ug/kg	15.4642	167
Dimethyl phthalate	131-11-3	ug/kg	35.07	167
Benzo(a)anthracene	56-55-3	ug/kg	18.8042	100.2
Benzo(a)pyrene	50-32-8	ug/kg	40.748	133.6
Benzo(b)fluoranthene	205-99-2	ug/kg	28.1228	100.2
Benzo(k)fluoranthene	207-08-9	ug/kg	26.72	100.2
Chrysene	218-01-9	ug/kg	17.368	100.2
Acenaphthylene	208-96-8	ug/kg	25.7848	133.6
Anthracene	120-12-7	ug/kg	32.565	100.2
Benzo(ghi)perylene	191-24-2	ug/kg	19.6392	133.6
Fluorene	86-73-7	ug/kg	16.2324	167
Phenanthrene	85-01-8	ug/kg	20.3072	100.2
Dibenzo(a,h)anthracene	53-70-3	ug/kg	19.3052	100.2
Indeno(1,2,3-cd)Pyrene	193-39-5	ug/kg	23.2798	133.6
Pyrene	129-00-0	ug/kg	16.5998	100.2
Biphenyl	92-52-4	ug/kg	38.744	380.76
4-Chloroaniline	106-47-8	ug/kg	30.394	167
2-Nitroaniline	88-74-4	ug/kg	32.1976	167
3-Nitroaniline	99-09-2	ug/kg	31.4962	167
4-Nitroaniline	100-01-6	ug/kg	69.138	167
Dibenzofuran	132-64-9	ug/kg	15.7982	167
2-Methylnaphthalene	91-57-6	ug/kg	20.1736	200.4
Acetophenone	98-86-2	ug/kg	20.6746	167
2,4,6-Trichlorophenol	88-06-2	ug/kg	31.6632	100.2
P-Chloro-M-Cresol	59-50-7	ug/kg	24.883	167
2-Chlorophenol	95-57-8	ug/kg	19.7394	167
2,4-Dichlorophenol	120-83-2	ug/kg	26.8536	150.3
2,4-Dimethylphenol	105-67-9	ug/kg	55.11	167

TABLE I
ANALYTE DETECTION LIMITS IN GROUNDWATER AND SOIL
 BCP Site # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
2-Nitrophenol	88-75-5	ug/kg	62.792	360.72
4-Nitrophenol	100-02-7	ug/kg	68.136	233.8
2,4-Dinitrophenol	51-28-5	ug/kg	77.822	801.6
4,6-Dinitro-o-cresol	534-52-1	ug/kg	80.16	434.2
Pentachlorophenol	87-86-5	ug/kg	36.74	133.6
Phenol	108-95-2	ug/kg	25.217	167
2-Methylphenol	95-48-7	ug/kg	25.885	167
3-Methylphenol/4-Methylphenol	106-44-5	ug/kg	26.1522	240.48
2,4,5-Trichlorophenol	95-95-4	ug/kg	31.9972	167
Benzoic Acid	65-85-0	ug/kg	169.004	541.08
Benzyl Alcohol	100-51-6	ug/kg	51.102	167
Carbazole	86-74-8	ug/kg	16.2324	167
Pesticides (8081B)				
Delta-BHC	319-86-8	ug/kg	1.56651	7.9992
Lindane	58-89-9	ug/kg	1.489851	3.333
Alpha-BHC	319-84-6	ug/kg	0.946572	3.333
Beta-BHC	319-85-7	ug/kg	3.03303	7.9992
Heptachlor	76-44-8	ug/kg	1.793154	3.9996
Aldrin	309-00-2	ug/kg	2.816385	7.9992
Heptachlor epoxide	1024-57-3	ug/kg	4.49955	14.9985
Endrin	72-20-8	ug/kg	1.36653	3.333
Endrin aldehyde	7421-93-4	ug/kg	3.49965	9.999
Endrin ketone	53494-70-5	ug/kg	2.059794	7.9992
Dieldrin	60-57-1	ug/kg	2.49975	4.9995
4,4'-DDE	72-55-9	ug/kg	1.849815	7.9992
4,4'-DDD	72-54-8	ug/kg	2.853048	7.9992
4,4'-DDT	50-29-3	ug/kg	6.43269	14.9985
Endosulfan I	959-98-8	ug/kg	1.889811	7.9992
Endosulfan II	33213-65-9	ug/kg	2.673066	7.9992
Endosulfan sulfate	1031-07-8	ug/kg	1.523181	3.333
Methoxychlor	72-43-5	ug/kg	4.6662	14.9985
Toxaphene	8001-35-2	ug/kg	41.9958	149.985
cis-Chlordane	5103-71-9	ug/kg	2.786388	9.999
trans-Chlordane	5103-74-2	ug/kg	2.639736	9.999
Chlordane	57-74-9	ug/kg	26.49735	64.9935
Herbicides (8151A)				
2,4-D	94-75-7	ug/kg	10.4895	166.5
2,4,5-T	93-76-5	ug/kg	5.1615	166.5
2,4,5-TP (Silvex)	93-72-1	ug/kg	4.4289	166.5
Polychlorinated biphenyls (PCBs) (8082A)				
Aroclor 1016	12674-11-2	ug/kg	3.7989	33.5
Aroclor 1221	11104-28-2	ug/kg	5.0987	33.5
Aroclor 1232	11141-16-5	ug/kg	3.2964	33.5
Aroclor 1242	53469-21-9	ug/kg	4.1004	33.5
Aroclor 1248	12672-29-6	ug/kg	3.7587	33.5
Aroclor 1254	11097-69-1	ug/kg	2.7336	33.5
Aroclor 1260	11096-82-5	ug/kg	3.4974	33.5
Aroclor 1262	37324-23-5	ug/kg	2.7537	33.5
Aroclor 1268	11100-14-4	ug/kg	2.3718	33.5
PCBs, Total	1336-36-3	ug/kg	1.541	33.5
Metals (6010C)				
Aluminum, Total	7429-90-5	mg/kg	1.08	4
Antimony, Total	7440-36-0	mg/kg	0.152	2

TABLE I
ANALYTE DETECTION LIMITS IN GROUNDWATER AND SOIL
 BCP Site # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
Arsenic, Total	7440-38-2	mg/kg	0.0832	0.4
Barium, Total	7440-39-3	mg/kg	0.0696	0.4
Beryllium, Total	7440-41-7	mg/kg	0.0132	0.2
Cadmium, Total	7440-43-9	mg/kg	0.0392	0.4
Calcium, Total	7440-70-2	mg/kg	1.4	4
Chromium, Total	7440-47-3	mg/kg	0.0384	0.4
Cobalt, Total	7440-48-4	mg/kg	0.0664	0.8
Copper, Total	7440-50-8	mg/kg	0.1032	0.4
Iron, Total	7439-89-6	mg/kg	0.3612	2
Lead, Total	7439-92-1	mg/kg	0.1072	2
Magnesium, Total	7439-95-4	mg/kg	0.616	4
Manganese, Total	7439-96-5	mg/kg	0.0636	0.4
Nickel, Total	7440-02-0	mg/kg	0.0968	1
Potassium, Total	7440-09-7	mg/kg	5.76	100
Selenium, Total	7782-49-2	mg/kg	0.1032	0.8
Silver, Total	7440-22-4	mg/kg	0.1132	0.4
Sodium, Total	7440-23-5	mg/kg	1.26	80
Thallium, Total	7440-28-0	mg/kg	0.126	0.8
Vanadium, Total	7440-62-2	mg/kg	0.0812	0.4
Zinc, Total	7440-66-6	mg/kg	0.1172	2
Mercury, Total	7439-97-6	mg/kg	0.016896	0.08
AIR				
Volatile Organic Compounds (TO-15)				
1,1,1-Trichloroethane	71-55-6	ppbV	0.057	0.2
1,1,2,2-Tetrachloroethane	79-34-5	ppbV	0.0548	0.2
1,1,2-Trichloroethane	79-00-5	ppbV	0.0667	0.2
1,1-Dichloroethane	75-34-3	ppbV	0.0771	0.2
1,1-Dichloroethene	75-35-4	ppbV	0.0566	0.2
1,2,3-Trimethylbenzene	526-73-8	ppbV	0.0751	0.2
1,2,4-Trichlorobenzene	120-82-1	ppbV	0.0611	0.2
1,2,4-Trimethylbenzene	95-63-6	ppbV	0.0694	0.2
1,2,4,5-Tetramethylbenzene	95-93-2	ppbV	0.0795	0.2
1,2-Dibromoethane	106-93-4	ppbV	0.0779	0.2
1,2-Dichlorobenzene	95-50-1	ppbV	0.0614	0.2
1,2-Dichloroethane	107-06-2	ppbV	0.0552	0.2
1,2-Dichloropropane	78-87-5	ppbV	0.0697	0.2
1,3,5-Trimethylbenzene	108-67-8	ppbV	0.0584	0.2
1,3-Butadiene	106-99-0	ppbV	0.0799	0.2
1,3-Dichlorobenzene	541-73-1	ppbV	0.0637	0.2
1,4-Dichlorobenzene	106-46-7	ppbV	0.0418	0.2
1,4-Dioxane	123-91-1	ppbV	0.078	0.2
2,2,4-Trimethylpentane	540-84-1	ppbV	0.0659	0.2
2-Butanone	78-93-3	ppbV	0.0522	0.5
2-Hexanone	591-78-6	ppbV	0.0604	0.2
2-Methylthiophene	554-14-3	ppbV	0.0789	0.2
3-Methylthiophene	616-44-4	ppbV	0.0669	0.2
3-Chloropropene	107-05-1	ppbV	0.0812	0.2
2-Ethylthiophene	872-55-9	ppbV	0.0571	0.2
4-Ethyltoluene	622-96-8	ppbV	0.0776	0.2
Acetone	67-64-1	ppbV	0.165	1
Benzene	71-43-2	ppbV	0.0537	0.2
Benzyl chloride	100-44-7	ppbV	0.0645	0.2
Benzothiophene	95-15-8	ppbV	0.0468	0.5
Bromodichloromethane	75-27-4	ppbV	0.0656	0.2
Bromoform	75-25-2	ppbV	0.0523	0.2
Bromomethane	74-83-9	ppbV	0.0696	0.2

TABLE I
ANALYTE DETECTION LIMITS IN GROUNDWATER AND SOIL
 BCP Site # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analyte	CAS Number	Units	Method Detection Limit (MDL)	Reporting Limit (RL)
Carbon disulfide	75-15-0	ppbV	0.0345	0.2
Carbon tetrachloride	56-23-5	ppbV	0.0471	0.2
Chlorobenzene	108-90-7	ppbV	0.0789	0.2
Chloroethane	75-00-3	ppbV	0.0767	0.2
Chloroform	67-66-3	ppbV	0.0452	0.2
Chloromethane	74-87-3	ppbV	0.0958	0.2
cis-1,2-Dichloroethene	156-59-2	ppbV	0.0587	0.2
cis-1,3-Dichloropropene	10061-01-5	ppbV	0.0745	0.2
Cyclohexane	110-82-7	ppbV	0.0656	0.2
Carbon tetrachloride	56-23-5	ppbV	0.007	0.02
Tetrachloroethene	127-18-4	ppbV	0.008	0.02
Trichloroethene	79-01-6	ppbV	0.007	0.02
Vinyl chloride	75-01-4	ppbV	0.006	0.02

Notes:

1. The information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.
2. Laboratory parameters for soil samples will be determined by the Excavation Work Plan. Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

TABLE II
SUMMARY OF ANALYSIS METHOD, PRESERVATION METHOD, HOLDING TIME, SAMPLE SIZE REQUIREMENTS AND SAMPLE CONTAINERS
 BCP SITE # C828148 - FORMER AB DICK FACILITY
 ROCHESTER, NEW YORK

Analysis/Method	Sample Type	Preservation	Holding Time	Volume/Weight	Container
Volatile Organic Compounds/8260C	Groundwater	HCl, Cool, 4 ± 2 °C	14 days	120 mL	3 - 40ml glass vials
Volatile Organic Compounds/8260C	Soil	1 - 1 Vial MeOH/2 Vial Water	14 days	120 mL	3 - 40ml glass vials
Semivolatile Organic Compounds/8270D	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Pesticides/8081B	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Herbicides/8151A	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Polychlorinated Biphenyls/8082A	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Metals/6010C	Soil	Cool, 4 ± 2 °C	180 days	60 mL	1 - 2 oz Glass
Total Organic Carbon/Lloyd Kahn	Groundwater	H ₂ SO ₄ , Cool, 4 ± 2 °C	28 days	120 mL	3 - 40ml glass vials
Total Iron/6010	Groundwater	HNO ₃ Cool, 4 ± 2 °C	180 days	250 mL	250 mL plastic bottle
Dissolved Iron/6010	Groundwater	HNO ₃ Cool, 4 ± 2 °C	180 days	250 mL	250 mL plastic bottle
Sulfate/SM 4500 CL-E	Groundwater	Cool, 4 ± 2 °C	28 days	120 mL	120 mL plastic bottle
Chloride (9251)	Groundwater	HNO ₃ Cool, 4 ± 2 °C	28 days	250 mL	250 mL plastic bottle
Ethene (5310C)	Groundwater	HNO ₃ Cool, 4 ± 2 °C	14 days	120 mL	2 - 20ml glass vials
Volatile Organic Compounds/TO-15	Air	None	30 days	2.7 Liters	1 - 2.7 Liter Summa Canister

Notes:

1. Refer to text for additional information.

APPENDIX G

Site Inspection Form

Site Inspection Form

Reporting Period:

Location (Site/Facility Name): _____
Location (Address): _____
Client: _____

Date: _____
Performed By: _____
Job Number: _____

Reason for Inspection: ☐ Annual Inspection
☐ Severe Weather Condition
☐ Other (Describe) _____

1. Site Use & Ownership

- a. Current Site Use & Owner _____
- b. Has site use or owner changed since previous inspection? ☐ YES ☐ NO
If "yes", describe: _____

- If "yes", was notification made to the NYSDEC?* ☐ YES ☐ NO
- c. Have permits been issued for the property since previous inspection? ☐ YES ☐ NO
If "yes", describe: _____

2. Engineering Controls

- a. Are engineering controls in place and functioning as designed? ☐ YES ☐ NO
- i. Site Cover ☐ intact ☐ needs repair *describe :* _____

- b. Have excavations occurred that breached the cover system? ☐ YES ☐ NO
If "yes", describe: _____

- If "yes", was SMP followed (attach documentation to PRR)?* ☐ YES ☐ NO

3. Institutional Controls

- a. Is the site in compliance with the environmental easement? ☐ YES ☐ NO ☐ UNKNOWN
- b. Is the site being used for commercial/industrial use? ☐ YES ☐ NO ☐ UNKNOWN
- c. Has groundwater been used for any purpose? ☐ YES ☐ NO ☐ UNKNOWN
- d. Is work at the site being conducted in accordance with the SMP? ☐ YES ☐ NO ☐ UNKNOWN

Site Inspection Form**Reporting Period:** _____

Location (Site/Facility Name): _____
Location (Address): _____
Client: _____

Date: _____
Performed By: _____
Job Number: _____

Reason for Inspection: ☐ Annual Inspection
☐ Severe Weather Condition
☐ Other (*Describe*) _____

4. Monitoring (indicate if/when monitoring was conducted during the reporting period)

a. Groundwater monitoring ☐ YES ☐ NO Dates: _____

5. Soil Export, Import, Re-Use During Reporting Period

a. Was soil imported to or excavated and re-used on the site? ☐ YES ☐ NO

If "yes", describe: _____

If "yes", was SMP followed (attach documentation to PRR)? ☐ YES ☐ NO

b. Was soil excavated and disposed? ☐ YES ☐ NO

If "yes", describe: _____

If "yes", was SMP followed (attach documentation to PRR)? ☐ YES ☐ NO

Other Notes and Information:

APPENDIX H

Field Sampling Plan



www.haleyaldrich.com

FIELD SAMPLING PLAN
811 JEFFERSON ROAD
ROCHESTER, NEW YORK

by Haley & Aldrich of New York
Rochester, New York

for 811 Jefferson Road LLC
Rochester, New York

File No. 128437-010
November 2017

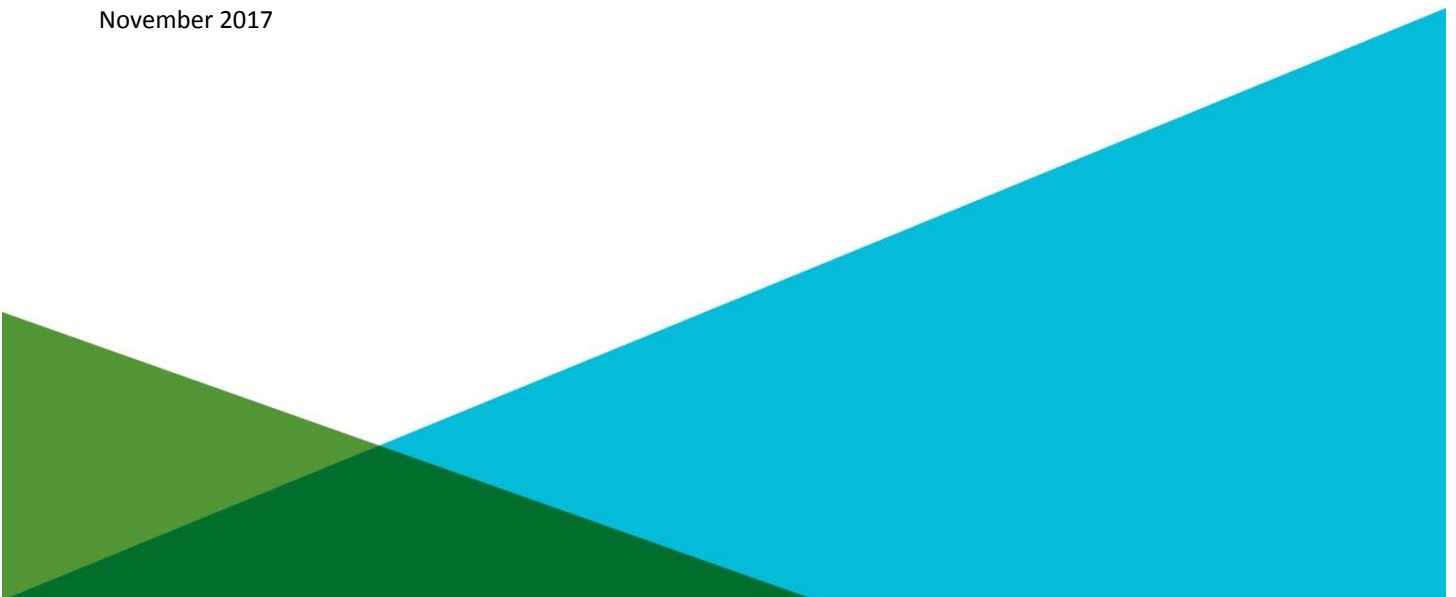


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APPENDIX A – Field Forms

1. Introduction

This Field Sampling Plan (FSP) has been prepared on behalf of 811 Jefferson Road, LLC as a component of the Site Management Plan (SMP) for the Former AB Dick, Henrietta, New York. This document was prepared to establish field procedures for field data collection to be performed in support of the SMP for the Site.

The SMP includes this Field Sampling Plan, a Quality Assurance Project Plan (QAPP), Health and Safety Plan (HASP), and Community Air Monitoring Plan (CAMP), which are included as part of this plan by reference.

The standard operating procedures (SOP) included as components of this plan will provide the procedures necessary to meet the project objectives. The SOPs will be used as reference for the methods to be employed for field sample collection and handling and the management of field data collected in the execution of the approved SMP. The SOPs includes numerous methods to execute the tasks of the SMP. The Project Manager will select the appropriate method as required by field conditions and/or the objective the respective project task at the time of sample collection. Field procedures will be conducted in general accordance with the New York State Department of Conservation (NYSDEC) Technical Guidance for Site Investigation and Remediation (DER-10) when applicable.

2. Field Program

This FSP provides the general purpose of sampling as well as procedural information. The SMP contains the details on sampling and analysis (locations, depths, frequency, analyte lists, etc.).

The field program has been designed to acquire the necessary data to comply with the SMP and includes the following tasks:

- Excavation soil sampling;
- Stockpile sampling;
- Groundwater sampling;
- Soil vapor, indoor air, and outdoor ambient air sampling; and
- Sampling of decommissioned equipment and investigation of derived wastes (IDW) as needed for disposal.

The primary objective of sampling activities is to monitor environmental conditions post remedial actions and accurately to evaluate the potential for additional remedial actions. The sampling will be conducted so that samples collected will retain, as much as possible, its original physical form and chemical composition.

These standard operating procedures (SOP) presented herein may be changed as required, dependent on-site conditions, or equipment limitations, at the time of sample collection. If the procedures employed differ from the SOP, the deviations will be documented in the associated sampling report.

3. Utility Clearance

Invasive field investigation activities such as drilling, soil gas surveys, test pit excavation or remedial construction activities require location of underground utilities prior to initiating work. Such clearance is sound practice in that it minimizes the potential for damage to underground facilities and more importantly, is protective of the health and safety of personnel. Under no circumstances will invasive activities be allowed to proceed without obtaining proper utility clearance by the appropriate public agencies and/or private entities. This clearance requirement applies to all work on both public and private property, whether located in a dense urban area or a seemingly out-of-the-way rural location.

The drilling contractor performing the work will be responsible for obtaining utility clearance.

Utility clearance is required by law, and obtaining clearance includes contacting a public or private central clearance agency via a “one-call” telephone service and providing the proposed exploration location information. It is important to note that public utility agencies may not, and usually do not have information regarding utility locations on private property.

Before making any proposed exploration or underground construction locations, it is critical that all readily-available information on underground utilities and structures be obtained. This includes publicly-available information as well as information in the possession of private landowners. Any drawings obtained must be reviewed in detail for information pertaining to underground utilities.

Using the information obtained, the site should be viewed in detail for physical evidence of buried lines or structures, including pavement cuts and patches, variation in or lack of vegetation, variations in grading, etc. (Care must also be taken to avoid overhead utilities as well). Presence of surface elements of buried utilities should be documented, such as manholes, gas or water service valves, catch basins, monuments or other evidence.

Overhead utility lines must be taken into account when choosing exploration and excavation locations. Most states require a minimum of 10 ft. of clearance between equipment and energized wires. Such separation requirements may also be voltage-based and may vary depending on state or municipality regulations. In evaluating clearance from overhead lines, the same restrictions may apply to “drops”, or wires on a utility pole connecting overhead and underground lines.

Using the information obtained and observations made, proposed exploration or construction locations should be marked in the field. Marking locations can be accomplished using spray paint on the ground, stakes, or other means. All markings of proposed locations should be made in white, in accordance with the generally-accepted universal color code for facilities identification (AWMA 4/99):

- White: Proposed Excavation or Drilling location
- Pink: Temporary Survey Markings
- Red: Electrical Power Lines, Cables, Conduit and Lighting Cables
- Yellow: Gas, Oil, Steam, Petroleum or Gaseous Materials
- Orange: Communication, Alarm or Signal Lines, Cables or Conduits
- Blue: Potable Water
- Purple: Reclaimed Water, Irrigation and Slurry Lines
- Green: Sewers and Drain Lines

In order to effectively evaluate the proposed locations with these entities, detailed, accurate measurements between the proposed locations and existing surface features should be obtained. Such features can be buildings, street intersections, utility poles, guardrails, etc.

Obtaining the utility clearance generally involves two entities:

- The designated “One-Call” underground facilities protection organization for the area; and the landowner.
- In addition, a third-party utility locator company will be utilized to locate underground utilities outside of the public right-of-way followed by “soft dig” excavation techniques to confirm or deny the presence of underground utilities in the area.

Both entities must be contacted and the proposed locations evaluated in light of information available for existing underground facilities. The detailed measurement information described above will be required by the “one call” agency. The owners of the applicable, participating underground utilities are obligated to mark their respective facilities at the site in the colors described above. Utility stake-out activities will typically not commence for approximately 72 hours after the initial request is made.

The public and private utility entities generally only mark the locations of their respective underground facilities within public rights-of-way. Determination of the locations of these facilities on private property will be the responsibility of the property owner or Contractor. If available information does not contain sufficient detail to locate underground facilities with a reasonable amount of confidence, alternate measures may be appropriate, as described below. In some cases, the memory of a long-time employee of a facility on private property may be the best or only source of information. It is incumbent on the Consultant or Contractor to exercise caution and use good judgement when faced with uncertainty.

Note: It is important to note that not all utilities are participants in the “one-call” agency or process. As such, inquiries must be made with the “one-call” agency to determine which entities do not participate, so they can be contacted independently.

Most utility stake-outs have a limited time period for which they remain valid, typically two to three weeks. It is critical that this time period be taken into account to prevent expiration of clearance prior to completion of the invasive activities, and the need to repeat the stake-out process.

Care must be exercised to document receipt of notice from the involved agencies of the presence or absence of utilities in the vicinity of the proposed locations.

Most agencies will generally provide a telephone or fax communication indicating the lack of facilities in the project area. If contact is not made by all of the agencies identified by the “one-call” process, do not assume that such utilities are not present. Re-contact the “one-call” agency to determine the status.

For complicated sites with multiple proposed locations and multiple utilities, it is advisable to arrange an on-site meeting with utility representatives. This will minimize the potential for miscommunication amongst the involved parties.

Completion of the utility stake out process is not a guarantee that underground facilities will not be encountered in excavations or boreholes; in fact, most “one-call” agencies and individual utilities do not offer guarantees, nor do they accept liability for damage that might occur. In areas outside the public right-of-way, a utility locating service will be utilized to locate underground utilities. It is advisable that any invasive activities proceed with extreme caution in the upper four to five feet in the event the clearance has failed to identify an existing facility. This may necessitate hand-excavation or probing to confirm potential presence of shallow utilities. If uncertainty exists for any given utility, extra activities can be initiated to solve utility clearance concerns. These options include:

- Screening the proposed work areas with utility locating devices, and/or hiring a utility locating service to perform this task. The private utility locating service is a growing industry that has formed a national organization. The National Utility Locate Contractors Association (NULCA) can be reached at 715-635-6004.
- Hand digging, augering or probing to expose or reveal shallow utilities and confirm presence and location. In northern climates, this may require advancing to below frost line, typically at least four feet.
- Using “soft dig” techniques that utilize specialized tools and compressed air to excavate soils and locate utilities. This technique is effective in locating utilities to a depth of four to five feet.

Equipment/Materials:

- White Spray paint
- Wooden stakes, painted white or containing white flagging
- Color-code key
- Available drawings

References:

- New York State Code Rule 753
- American Public Works Association, April 1999, Uniform Color Code (<http://www.apwa.net/>)

4. Field Data Recording

This procedure describes protocol for documenting the investigation activities in the field. Field data serves as the cornerstone for an environmental project, not only for site characterization but for additional phases of investigation or remedial design. Producing defensible data includes proper and appropriate recording of field data as it is obtained in a manner to preserve the information for future use. This procedure provides guidelines for accurate, thorough collection and preservation of written and electronic field data.

Field data to be recorded during the project generally includes, but is not limited to, the following:

- general field observations;
- numeric field measurements and instrument readings;
- quantity estimates;
- sample locations and corresponding sample numbers;
- relevant comments and details pertaining to the samples collected;
- documentation of activities, procedures and progress achieved;
- contractor pay item quantities;
- weather conditions;
- a listing of personnel involved in site-related activities;
- a log of conversations, site meetings and other communications; and
- field decisions and pertinent information associated with the decisions.

4.1 WRITTEN FIELD DATA

Written field data will be collected using a standardized, pre-printed field log form. In general, use of a field log form is preferable as it prompts field personnel to make appropriate observations and record data in a standardized format. This promotes completeness and consistency from one person to the next. Otherwise, electronic data collection using a handheld device produces equal completeness and consistency using a preformatted log form.

In the absence of an appropriate pre-printed form, the data should be recorded in an organized and structured manner in a dedicated project field log book. Log books must be hard-cover, bound so that pages cannot be added or removed, and should be made from high-grade 50% rag paper with a water-resistant surface.

The following are guidelines for use of field log forms and log books:

1. Information must be factual and complete. Do not abbreviate.
2. All entries will be made in black indelible ink with a ballpoint pen and will be written legibly. Do not use “rollerball” or felt tip-style pens, since the water-soluble ink can run or smear in the presence of moisture.
3. All pages in a log book must be consecutively numbered. Field log forms should also be consecutively numbered.

4. Each day's work must start a new log book page.
5. At the end of each day, the current log book page must be signed and dated by the field personnel making the entries.
6. When using field log forms, they must also be signed and dated.
7. Make data entries immediately upon obtaining the data. Do not make temporary notes in other locations for later transfer to log forms or log books; this only increases the potential for error or loss of data.
8. Entry errors are to be crossed out with a single line, dated and initialed by the person making the correction.
9. Do not leave blanks on log forms, if no entry is applicable for a given data field, indicate so with "NA" or a dash ("--").
10. At the earliest practical time, photocopies of log forms and log book pages should be made and placed in the project file as a backup in the event the book or forms are lost or damaged.
11. Log books should be dedicated to one project only, i.e., do not record data from multiple projects in one log book.

4.2 ELECTRONIC DATA

Electronic data recording involves electronic measurement of field information through the use of monitoring instruments, sensors, gauges, and equipment controls. The following is a list of guidelines for proper recording and management of electronic field data:

1. Field data management should follow requirements of a project-specific data management plan (DMP), if applicable.
2. Use only instruments that have been calibrated in accordance with manufacturer's recommendations.
3. Usage of instruments, controls and computers for the purpose of obtaining field data should only be performed by personnel properly trained and experienced in the use of the equipment and software.
4. Use only fully-licensed software on personal computers and laptops.
5. Loss of electronic files may mean loss of irreplaceable data. Every effort should be made to back up electronic files obtained in the field as soon as practical. A backup file placed on a disk and kept in a separate location from the original will minimize the potential for loss.
6. Electronic files, once transferred from field instruments or laptops to office computers, should be protected if possible to prevent unwanted or inadvertent manipulation or modification of data. Several levels of protection are usually available for spreadsheets, including making a file "read-only" or assigning a password to access the file.

7. Protect CD disks from exposure to moisture, excessive heat or cold, magnetic fields, or other potentially damaging conditions.
8. Remote monitoring is often used to obtain stored electronic data from site environmental systems. A thorough discussion of this type of electronic field data recording is beyond the scope of this Section. Such on-site systems are generally capable of storing a limited amount of data as a comma-delimited or spreadsheet file. Users must remotely access the monitoring equipment files via modem or other access, and download the data. In order to minimize the potential for loss of data, access and downloading of data should be performed frequently enough to insure the data storage capacity of the remote equipment is not exceeded.

Equipment/Materials:

- Appropriate field log forms or iPad® or equivalent with preformatted log forms.
- Indelible ball point pen (do not use “rollerball” or felt-tip style pens);
- Straight edge;
- Pocket calculator; and
- Laptop computer (if required).

5. Aquifer Characterization

This procedure describes measurement of water levels in groundwater monitoring and extraction wells, piezometers and boreholes. This procedure does not cover automated measurement of water levels with a transducers/datalogger, and does not cover measurement of phase-separated liquids.

Water levels in monitoring wells will be measured prior to each sampling event and at other times as indicated in the project Work Plan. Water levels will be acquired in a manner that provides accurate data that can be used to calculate vertical and horizontal hydraulic gradients and other hydrogeologic parameters. Accuracy in obtaining the measurements is critical to insure the usability of the data.

5.1 PROCEDURE

In order to provide reliable data, water level monitoring events should be collected over as short a period of time as practical. Barometric pressure can affect groundwater levels and, therefore, observation of significant weather changes during the period of water level measurements must be noted. Rainfall events and groundwater pumping can also affect groundwater level measurements. Personnel collecting water level data must note if any of these controls are in effect during the groundwater level collection period. Due to possible changes during the groundwater level collection period, it is imperative that the time of data collection at each station be accurately recorded.

The depth to groundwater will be measured with an electronic depth-indicating probe. Prior to obtaining a measurement, a fixed reference point on the well casing will be established for each well to be measured. Unless otherwise established, the reference point is typically established and marked on the north side of the well casing. Do not use protective casings or flush-mounted road boxes as a reference, due to the potential for damage or settlement. The elevation of the reference point shall be obtained by accepted surveying methods, to the nearest 0.01 ft.

The water level probe will be lowered into the well until the meter indicates (via indicator light or tone) the water is reached. The probe will be raised above water level and slowly lowered again until water is indicated. The cable will be held against the side of the inner protective casing at the point designated for water level measurements and a depth reading taken. This procedure will be followed three times or until a consistent value is obtained. The value will be recorded to the nearest 0.01 feet on the Groundwater Level Monitoring Report form or other designated data recording location if specified in the project Work Plan.

Upon completion, the probe will be raised to the surface and together with the amount of cable that entered the well casing, will be decontaminated in accordance with methods described in Equipment Decontamination Procedure.

Equipment/Materials:

- Battery-operated, non-stretch electronic water level probe with permanent markings at 0.01 ft. increments (traceable to national measurement standards), such as the Solinst Model 101 or equivalent.
- The calibrated cable on the depth indicator will be checked against a surveyor's steel tape once per quarter year. A new cable will be installed if the cable has changed by more than 0.01%

(0.01 feet for a 100-foot cable). See also the Field Instruments – Use and Calibration Procedure.

- Groundwater Level Monitoring Report form.

References:

1. ASTM 4750 Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation Well)
2. ASTM D6000 Guide for Presentation of Water Level Information from Ground Water Sites

6. Sample Collection for Laboratory Analysis

6.1 SOIL SAMPLE COLLECTION FOR LABORATORY ANALYSIS

The following procedure is an introduction to excavation and stockpile soil sampling techniques and an outline of field staff responsibilities.

6.1.1 Preparatory Requirements

Prior to the beginning of any remedial activities, staff must attend a project briefing for the purpose of reviewing the project work plan, site and utility plans, drawings, applicable regulations, sampling location, depth, and criteria, site restoration, site contacts, and other related documents. The individual nature of these concerns will be addressed by a site-specific Health & Safety Plan.

A file folder for the field activities should be created and maintained such that all relevant documents and log forms likely to be useful for the completion of field activities by others are readily available in the event of personnel changes.

6.1.2 Excavation Soil Sampling

Excavation programs are by nature more destructive than other subsurface remedial methods. Field staff should be clear as to the expectations of the client and project manager with regard to site damage and restoration efforts, prior to the start of work. All applicable safety standards must be complied with including establishment of exclusion zones, installation of safety fencing, use of trench boxes, maintenance of proper slopes or benching, and provision of access and egress. The Occupational Safety and Health Administration's (OSHA) Excavation and Trenching Standard Title 29 of the Code of Federal Regulation (CFR) Part 1926.650 covers requirements for excavation and trenching standards which may be accessed through their website www.OSHA.gov or from your Health & Safety Administrator.

6.1.3 Stockpile Soil Sampling

Excavated soil should be temporarily placed in secure stockpiles pending characterization and off-Site disposal at licensed waste management facilities. Impacted soil should be placed in dedicated stockpiles on top of and completely covered with polyethylene sheeting of at least 6 millimeters in thickness to prevent exposure to the elements. Covers should be anchored when the stockpile is not in active use or during non-working periods and inspected at least weekly and after each rain event. The sheeting should be repaired or replaced as needed.

6.1.4 Sampling Techniques

The following procedure describes typical soil sample collection methods for submission of samples to a laboratory for chemical analysis. The primary goal of soil sampling is to collect representative samples for examination and chemical analysis (if required).

Environmental soil samples obtained for chemical analyses are collected with special attention given to the rationale behind determining the precise zone to sample, the specifics of the method of soil extraction and the requisite decontamination procedures. Preservation, handling and glassware for

environmental soil samples varies considerably depending upon several factors including the analytical method to be conducted, and the analytical laboratory being used.

6.1.4.1 Grab Versus Composite Samples

A grab sample is collected to identify and quantify conditions at a specific location or interval. The sample is comprised of the minimum amount of soil necessary to make up the volume of sample dictated by the required sample analyses. Composite samples may be obtained from several locations or along a linear trend (in a test pit or excavation). Sampling may occur within or across stratification.

6.1.5 Stockpile Sampling Procedure

Soil sampling techniques are dependent upon the sample interval of interest, the type of soil material to be sampled, and the requirements for handling the sample after retrieval. The most common method for collection of surficial soil samples involves the use of a stainless-steel trowel. Soil samples may also be collected with stainless-steel spoons. The sampling equipment is cleaned between sample locations. The stockpile soil sampling procedure is outlined below:

- Stockpile soil samples will be collected using a pre-cleaned stainless-steel trowel or other appropriate tool. Each sample will consist of soil from 6 inches below the soil pile surface. If a composite sample is required, then the composite sample will be comprised of soil collected from four randomly selected areas of the pile.;
- A new pair of disposable gloves will be used at each sample location;
- Any surficial debris (i.e., grass cover, gravel) should be removed from the area where the sample is to be collected using a separate pre-cleaned device. Gravel presents difficulties for the laboratory in terms of sample preparation and is typically not representative of contaminant concentrations in nearby soil.
- A pre-cleaned sampling tool will be used to remove the sample from the layer of exposed soil.
- When only one sample container is required, the collected soil will be placed directly into the clean, pre-labeled sample jar. When more than one sample container is required for non-volatiles parameters of analysis (i.e. total metals) or samples will be split for field duplicate analyses, the soil sample will be placed in a pre-cleaned stainless-steel bowl, mixed, and then placed into the respective sample containers. It is important that soil samples be mixed as thoroughly as possible to ensure that the sample is as representative as possible of the sample interval. Soil samples collected for volatile organic compounds analyses shall not be mixed.
- Samples will be placed on ice or cooler packs in laboratory supplied shipping coolers after collection.

Note: For the collection of soil samples for the analysis of volatile organic compounds (VOCs), soil samples will be transferred directly into a sample jar without headspace. Samples for VOCs will be collected first, without homogenization or extra handling to limit the loss of the constituents of interest.

6.1.6 Excavation Sample Collection

The following describes the collection of soil samples for chemical analysis from an excavation pit or trench.

- Using the backhoe, excavate a trench as specified in the Work Plan. Place excavated soils on plastic sheets. Trenches greater than five feet deep must be sloped or protected by a shoring system, as required by OSHA regulations.
- Record in the Field Log book the depth intervals from which the samples are being collected.
- Samples are taken using a trowel, scoop, or coring device at the desired intervals. Be sure to scrape the vertical face at the point of sampling to remove any soil that may have fallen from above, and to expose fresh soil for sampling. In many instances, samples can be collected directly from the backhoe bucket.
- If volatile organic analyses are required, transfer the sample into an appropriate, labeled sample container with a stainless-steel spoon or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or,
- If a composite sample is collected, place a sample from each sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.
- The test pit/excavation should be backfilled in accordance with the project-specific work plan or related document.

Soil samples must be placed into laboratory glassware and labeled. Analytical samples are kept in a cooler with ice, and a Chain of Custody form is maintained until transfer to the analytical laboratory. Applicable environmental sampling protocols must be followed as given in OP3000 General Environmental Field Procedures and Protocol, OP3001 Preservation and Shipment of Environmental Samples, and OP3006 Procedures for Subsurface Soil Sampling for Chemical Analysis.

6.2 GROUNDWATER SAMPLE COLLECTION FOR LABORATORY ANALYSIS

The following section describes two techniques for groundwater sampling: "Low Stress/Low Flow Methods" and "Typical Sampling Methods."

"Low Stress/Low Flow" methods will be employed when collecting groundwater samples for the evaluation of volatile constituents (i.e. dissolved oxygen (DO)) or in fine-grained formations where sediment/colloid transport is possible. Analyses typically sensitive to colloidal transport issues include Polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs) and metals.

The "Typical Sampling Methods" will be employed where the collection of parameters less sensitive to turbidity/sediment issues are being collected (general chemistry, pesticides and other Semi volatile compounds (SVOCs)).

NOTE: If Non-aqueous phase liquids (NAPL) (light or dense) are detected in a monitoring well, groundwater sample collection will not be conducted and the Project Manager must be contacted to determine a course of action.

6.2.1 Preparatory Requirements

- Verify well identification and location using borehole log details and location layout figures. Note the condition of the well and record any necessary repair work required.
- Prior to opening the well cap, measure the breathing space above the well casing with a handheld organic vapor analyzer to establish baseline breathing space VOC levels. Repeat this measurement once the well cap is opened. If either of these measurements exceeds the air quality criteria in the HASP, field personnel should adjust their PPE accordingly.
- Prior to commencing the groundwater purging/sampling, a water level must be obtained to determine the well volume for hydraulic purposes. In some settings, it may be necessary to allow the water level time to equilibrate. This condition exists if a water tight seal exists at the well cap and the water level has fluctuated above the top of screen; creating a vacuum or pressurized area in this air space. Three water level checks will verify static water level conditions have been achieved.
- Calculate the volume of water in the well. Typically overburden well volumes consider only the quantity of water standing in the well screen and riser; bedrock well volumes are calculated on the quantity of water within the open core hole and within the overburden casing.

6.2.2 Well Purging and Stabilization Monitoring (Low Stress/Low Flow Method)

- The preferred method for groundwater sampling will be the low stress/low flow method described below.
- Bladder pumps/submersible variable rate pumps (i.e., Grundfos™ Rediflo or equivalent) are typically employed.
- Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified by the project requirements. The pump intake must be at the midpoint of the well screen to prevent disturbance and resuspension of any sediment in the screen base.
- Before starting the pump, measure the water level again with the pump in the well leaving the water level measuring device in the well when completed.
- Purge the well at 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level should be monitored approximately every 5 minutes, or as appropriate. A steady flow rate should be maintained that results in drawdown of 0.3 feet or less. The rate of pumping should not exceed the natural flow rate conditions of the well. Care should be taken to

maintain pump suction and to avoid entrainment of air in the tubing. Record adjustments made to the pumping rates and water levels immediately after each adjustment.

- During the purging of the well, monitor and record the field indicator parameters (pH, temperature, conductivity, oxidation-reduction (redox) reaction potential (ORP), dissolved oxygen (DO), and turbidity) approximately every five minutes. Stabilization is considered to be achieved when the final groundwater flow rate is achieved, and three consecutive readings for each parameter are within the following limits:
 - pH: 0.1 pH units of the average value of the three readings;
 - temperature: 3 percent of the average value of the three readings;
 - conductivity: 0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm and 0.01 mS/cm of the average value of the three readings for conductivity >1 mS/cm;
 - ORP: 10 millivolts (mV) of the average value of the three readings;
 - DO: 10 percent of the average value of the three readings; and
 - Turbidity: 10 percent of the average value of the three readings, or a final value of less than 50 nephelometric turbidity units (NTU).
- The pump must not be removed from the well between purging and sampling.

6.2.3 Sampling Techniques

- If an alternate pump is utilized, the first pump discharge volumes should be discarded to allow the equipment a period of acclimation to the groundwater.
- Samples are collected directly from the pump with the groundwater being discharged directly into the appropriate sample container. Avoid handling the interior of the bottle or bottle cap and don new gloves for each well sampled to avoid contamination of the sample.
- Order of sample collection:
 - Volatile organic compounds (VOC)
 - Semi-volatile organic compounds (SVOC)
 - Total organic carbon (TOC)
 - Total organic halogens (TOX)
 - Total metals
 - Dissolved metals
 - Phenols
 - Cyanide
 - Sulfate and chloride
 - Nitrate and ammonia
- For low stress/low flow sampling, samples should be collected at a flow rate between 100 and 500 mL/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 feet.

- The pumping rate used to collect a sample for VOC should not exceed 100 mL/min. Samples should be transferred directly to the final container 40 mL glass vials completely full and topped with a Teflon cap. Once capped the vial must be inverted and tapped to check for headspace/air presence (bubbles). If air is present, the sample will be discarded, and recollected until free of air.
- All samples must be labeled with:
 - A unique sample number
 - Date and time
 - Parameters to be analyzed
 - Project Reference ID
 - Samplers initials
- Labels should be written in indelible ink and secured to the bottle with clear tape.

Equipment/Materials:

- pH meter, Conductivity meter, Dissolved Oxygen (DO) meter, Oxidation reduction (redox) potential (ORP) meter, Nephelometer, Temperature gauge
- Field filtration units (if required)
- Purging/sampling equipment
 - Peristaltic Pump (not suitable for VOCs/SVOCs or depths >25 feet);
 - Suction Pumps (not suitable for VOCs/SVOCs, or depths >25 feet);
 - Submersible Pumps (suitable for VOCs/SVOCs at low flow rates (LFR));
 - Air Lift Pumps (not suitable for VOCs/SVOCs);
 - Bladder Pumps (suitable for LFR and VOCs/SVOCs);
 - Inertia Pumps (gaining acceptability for VOCs/SVOCs); and
- Water Level Probe
- Sampling Materials (containers, log book/forms, coolers, chain of custody)
- Work Plan
- Health and Safety Plan

Note: peristaltic pump use for VOC collection is not acceptable on NYSDEC/EPA/RCRA sites; this technique has gained acceptance in select areas where it is permissible to collect VOCs using a peristaltic pump at a low flow rate (ex. Michigan).

Field Notes:

- Field notes must document all the events, equipment used, and measurements collected during the sampling activities. Section 2.0 describes the data/recording procedure for field activities.
- The log book should document the following for each well sampled:
 - Identification of well
 - Well depth
 - Static water level depth and measurement technique
 - Sounded well depth
 - Presence of immiscible layers and detection/collection method
 - Well yield – high or low

- Purge volume and pumping rate
- Time well purged
- Measured field parameters
- Purge/sampling device used
- Well sampling sequence
- Sampling appearance
- Sample odors
- Sample volume
- Types of sample containers and sample identification
- Preservative(s) used
- Parameters requested for analysis
- Field analysis data and method(s)
- Sample distribution and transporter
- Laboratory shipped to
- Chain of custody number for shipment to laboratory
- Field observations on sampling event
- Name collector(s)
- Climatic conditions including air temperature
- Problems encountered and any deviations made from the established sampling protocol.

A standard log form for documentation and reporting groundwater purging and sampling events are presented on the Groundwater Sampling Record, Low Flow Groundwater Sampling Form, and Low Flow Monitored Natural Attenuation (MNA) Field Sampling Form. Refer to Appendix A for example field forms.

Groundwater/Decon Fluid Disposal:

- Groundwater disposal methods will vary on a case-by-case basis but may range from:
 - Off-site treatment at private treatment/disposal facilities or public owned treatment facilities
 - On-site treatment at Facility operated facilities
 - Direct discharge to the surrounding ground surface, allowing groundwater infiltration to the underlying subsurface regime
- Decontamination fluids should be segregated and collected separately from wash waters/groundwater containers.

References:

1. ASTM D5474: Guide for selection of Data Elements for Groundwater Investigations
2. ASTM D4696: Guide for pore-liquid sampling from the vadose zone
3. ASTM D5979: Guide for conceptualization and characterization of groundwater systems
4. ASTM D5903: Guide for planning and preparing for a groundwater sampling event
5. ASTM D4448: Standard guide for sampling groundwater wells
6. ASTM D6001: Standard guide for direct push water sampling for geo-environmental investigations.
7. USEPA: Low-flow (minimal drawdown) ground-water sampling procedures (EPA/540/S-95/504)

8. USEPALL: RCRA Groundwater Monitoring: Draft Technical guidance (EPA/530 R 93 001)

6.3 NON-AQUEOUS PHASE LIQUID (LNAPL) MONITORING AND SAMPLE COLLECTION

This procedure is for monitoring the presence of dense and light non-aqueous phase liquids (DNAPL and LNAPL), and collection of NAPL samples for laboratory analysis in monitoring, observation, and extraction wells.

It should be noted that groundwater samples should not be obtained for analysis at locations where NAPL has been identified.

6.3.1 NAPL Level Measurements

- Conduct well identification, inspection, and opening in accordance with the Manual Water Level Measurement Procedures.
- NAPL level measurements are best conducted using a dual phase interface probe. The interface probe uses an optical liquid sensor, in conjunction with an electric circuit to detect the top of a phase separated liquid and the interface between the phase layer and water (water level). The procedure for use of this probe is:
 - For LNAPL:
 - Lower the probe tip into the center of the well until discontinuous beeping is heard (this indicates the top of the LNAPL has been detected). Grasp the calibrated tape at the reference point and note reading. Confirm the reading by slowly raising and lowering the probe to the level of the phase layer.
 - Once the top of the phase layer is confirmed, slowly lower the probe until a continuous sound is heard. This indicates that the water level has been encountered. Grasp the tape at the reference point and note the reading. Confirm this water level measurement.
 - Decontaminate the submerged end of the tape and probe prior to the next use.
 - For DNAPL:
 - Lower the probe tip in the center of the well to the bottom of the well, a discontinuous beeping will be heard if DNAPL is present. Grasp the calibrated tape at the reference point and note reading.
 - Once the bottom of the well is confirmed, slowly raise the probe until a continuous sound is heard. This indicates that the water level has been encountered and represents the top of the DNAPL layer. Grasp the tape at the reference point and note the reading. Confirm this water level measurement.
 - Decontaminate the submerged end of the tape and probe prior to the next use.
- Alternative NAPL measurement methods exist in the event an interface probe is unavailable or not functioning properly. These methods tend to be less accurate than the interface probe but may be used to establish an estimated NAPL measurement.

- Clear Bailer: A clear bottom loading bailer may be used to estimate NAPL thickness if floating or denser than water. If NAPL presence is suspected, the bailer is carefully lowered to the location of suspected NAPL presence (top of water column/base of water column), and slowly removed and examined for NAPL. If present, the column of NAPL within the clear bailer can be measured to estimate the NAPL thickness within the groundwater column.
- Weighted Cord: Primarily used for DNAPL measurements, a weighted "cotton" string or cord may be lowered to the base of the well and inspected upon retrieval. Typically, the lower DNAPL layer will "coat" the string indicating the approximate thickness of this layer.

6.3.2 Well NAPL Sampling

- Prior to sampling, the level of NAPL in the well should be measured as identified above.
- Various sampling devices can be employed to acquire fluid samples from the top and bottom of the well, including the following:
 - Bottom-loading bailer;
 - Double check valve bailer (produces most reliable results);
 - Peristaltic pump for shallow wells (<25 feet in depth); or
 - Inertia pump for deeper wells (up to 300 feet in depth).
- Transfer NAPL to sample containers for shipment to laboratory. NAPL can be sampled to evaluate the physical properties of the fluid or to evaluate chemical composition. NAPL samples should be shipped in a separate cooler(s) from groundwater samples to avoid cross contamination of the groundwater samples.
- Decontaminate equipment prior to next use.

Note: Groundwater sampling shall not be performed in locations where NAPL is present.

Equipment/Materials:

- Interface Probe;
- Bottom-loading bailer;
- Double check valve bailer;
- Peristaltic pump;
- Inertia pump
- ICM Work Plan
- Health and Safety Plan
- Field Log Book

References:

1. Cohen, Robert M., Mercer, James W. (GeoTrans, Inc.), Robert S. Kerr Environmental Research Laboratory "DNAPL Site Evaluation" Office Research and Development. U.S. Environmental Protection Agency

2. Cohen, R.M., Brayda, A.P., Shaw, S.T., and Spaulding, C.P.; Fall 1992 "Evaluation of Visual Methods to Detect NAPL in Soil and Water", Groundwater Monitoring Review, Vol. 12 No. 4, pp. 132-141.

6.4 SOIL VAPOR, INDOOR AIR, AND OUTDOOR AMBIENT AIR SAMPLE COLLECTION USING SUMMA® CANISTERS

The following procedure is for the collection of soil vapor samples from temporary or permanent monitoring wells, indoor air samples, and outdoor ambient air samples for laboratory analysis by USEPA Method TO-15.

6.4.1 Preparatory Requirements

Personal protective equipment will be donned in accordance with the requirements of the project Health and Safety Plan.

- Don a new pair of Nitrile gloves prior to sampling activities at each location.
- Verify sample location identification using sampling plan figures. For soil vapor sampling, note the condition of the well completion and determine the integrity of the installation to mitigate infiltration of ambient air to the subsurface during sample collection.
- Prior to commencing purging/sampling tasks for soil vapor sampling, groundwater elevation measurements will be obtained at nearby monitoring wells in the groundwater monitoring well network. If the groundwater elevation is above the bottom of the soil vapor point well screen (creating a direct route of volatilization of contaminants to the well casing), sampling will be abandoned at this location. If the groundwater elevation is below the bottom of the soil vapor point well screen, proceed to well point purging and sampling.

6.4.2 Soil Vapor Sampling Techniques

- Soil vapor well points will be sampled in order of increasing chemical concentrations (if known or anticipated). Equipment calibration, field documentation, sampling, and shipping will be conducted in accordance with the FSP.
- Lay out sheet of clean polyethylene around the soil vapor well point for placement of the sampling equipment.
- Purge the installed well by connecting the well point to a pre-calibrated personal sampling pump (or equivalent device) using High Density Polyethylene (HDPE) tubing and extract at least 3 well volumes of soil vapor from the well point. The sampling pump may be connected to the well point using a stainless-steel hose barb, quick connect fitting, or Swagelock® pressure fitting.
- Using the well point installation report to obtain well depth, calculate the volume of air present in the well, using the formula $\pi r^2 h$. (1"=2.54 cm, 1L= 1,000 cm³). For example, a ½" diameter well that is six (6) feet deep contains approximately 0.23L of air.

- Purge the well at flow rates not to exceed 0.2 L/minute to remove at least 3 well volumes. This will ensure the sample collected for analysis is representative of soil gas located in the vadose zone.
- After purging, immediately shut off the pump and close off the well point to the atmosphere using a hose clamp or similar device. The soil vapor well point is now ready to be sampled.
- Verify the vacuum level in the passivated SUMMA® canister (or equivalent device) to be used for sample collection using the vacuum gauge supplied by the laboratory. Attach the gauge to the ¼" male fitting on the SUMMA® canister and open the valve approximately 1¼ turn. Record the initial vacuum on the sampling record, close the valve, and remove the vacuum gauge.
- Attach a 7µ moisture/particle filter between the well point HDPE tubing and the pre-calibrated integrated flow controller.
- Attach the integrated flow controller to the ¼" male fitting on the SUMMA® canister using a stainless steel open end wrench. (Note: Do not over tighten. ¼ turn past finger tight should be adequate to create a proper seal.)
- Prior to the initiation of sampling, conduct a confirmation of the installation integrity using a Helium (He) tracer gas test. To conduct He tracer test, place an enclosure over the sample point. Extend the HDPE tubing from the soil vapor through the enclosure and connect to a He selective hand-held analyzer.
- Flood the enclosure with commercial grade He from a disposable compressed gas cylinder. (commercial grade can be purchased from retail stores or provided by an industrial gas supplier (i.e. welding supply)).
- Turn on the He selective handheld analyzer and monitor for a deflection from background. If a negative deflection is noted, modify the surface seal for the vapor sampling point and re-test. If no deviation is noted, proceed with sample collection.
- Connect the SUMMA canister to the sampling HDPE tubing, open the valve on the SUMMA® canister gradually at least 1¼ turn and record the sample start time on the sampling record.
- At the conclusion of the sample collection, record the final time on the sampling record and close the valve.
- Disconnect the SUMMA® canister from the integrated flow controller, remove the filter, and reattach the vacuum gauge. Open the valve and record the final vacuum reading on the sampling record. Close the valve, remove the vacuum gauge and replace the ¼" cap on the canister inlet. Label the SUMMA® canister sample tag with proper well ID, vacuum readings and sampling time interval (e.g. 4 hours).
- Remove the sampling train tubing apparatus for the individual well and place into a sealable storage bag, and store for future sampling events. Label the storage bag with relevant soil vapor well designation, date of sampling, project name, and file number. Fill out Chain of Custody with project name, file number, sample identifications, Summa canister and related equipment

serial numbers, date and time collected, and analysis requirements. Retain copies of the Chain of Custody record and relevant shipping information. Place canisters back into their original boxes and ship them to the laboratory via an overnight courier.

- Prior to shipment, confirm that the canister is labeled with the information recorded on the Sample Identification Key and chain of -custody form. Labels will be written in indelible ink secured to the canister.
- For decommissioning of temporary well points after sampling has been completed:
 - Mix Portland cement and water (7lb. Portland cement : 1/2-gallon potable water)
 - Remove and discard the bentonite surface seal from the top of the borehole, pour the Portland cement/water mix into the open borehole to within 0.3 ft of ground surface.
 - Place concrete mix or asphalt patch as appropriate from 0.3 ft to ground surface.
- Clean/decontaminate all sampling equipment.

Equipment/Materials:

- Adjustable rate, positive displacement pumps for soil vapor point well purging. The pump will be easily adjustable and capable of operating reliably at flow rates from 100 to 500 mL/minute.
- HDPE or Teflon-lined polyethylene tubing. The tubing wall thickness will be maximized (3/8 to ½ inch) and the tubing length will be minimized (i.e. do not have excess tubing outside of the well).
- Polyethylene sheeting
- Nitrile gloves
- Power source (e.g. generator, nitrogen tank, etc). The generator should not be oversized for the pump.
- Helium Selective detector (Mark 9822, or equivalent)
- Nylon stay-ties
- Decontamination supplies
- Soil vapor well point/indoor air/outdoor ambient air sampling form
- Passivated SUMMA® Canister (or equivalent)
- Sample Identification Key
- Sample tags or labels
- Chain of custody
- Soil vapor well point construction data, location map, field data from last sampling event (if available)
- Project Health & Safety Plan

6.4.3 Indoor Air and Outdoor Ambient Air Sampling Techniques

- Place the SUMMA® canister on a table or bench so that the intake of the flow controller is at the approximate height of the breathing zone for facility workers (36 – 54 inches above the floor).

- Verify the vacuum level in the passivated SUMMA® canister (or equivalent device) to be used for sample collection using the vacuum gauge supplied by the laboratory. Attach the gauge to the ¼" male fitting on the SUMMA® canister and open the valve approximately 1¼ turn. Record the initial vacuum on the sampling record, close the valve, and remove the vacuum gauge.
- Attach a 7µ moisture/particle filter at the end of the pre-calibrated integrated flow controller.
- Attach the integrated flow controller to the ¼" male fitting on the SUMMA® canister using a stainless steel open end wrench. (Note: Do not over tighten. ¼ turn past finger tight should be adequate to create a proper seal.)
- Open the valve on the SUMMA® canister gradually at least 1¼ turn and record the sample start time on the sampling record.
- At the conclusion of the sample collection, record the final time on the sampling record and close the valve.
- Disconnect the SUMMA® canister from the integrated flow controller, remove the filter, and reattach the vacuum gauge. Open the valve and record the final vacuum reading on the sampling record. Close the valve, remove the vacuum gauge and replace the ¼" cap on the canister inlet. Label the SUMMA® canister sample tag with proper sampling location ID, vacuum readings and sampling time interval (e.g. 8 hours).
- Fill out the chain of custody with the project name, file number, sample identifications, SUMMA® canister and related equipment serial numbers, date and time collected, and analysis requirements. The final vacuum reading recorded at the end of the sampling period will also be placed on the sample chain of custody form prior to shipping to the laboratory, and each canister vacuum will be checked upon arrival at the laboratory to confirm sample integrity during shipment. Retain copies of the chain of custody record and relevant shipping information. Place canisters back into their original boxes and ship them to the laboratory via an overnight courier.
- Prior to shipment, confirm that the canister is labeled with the information recorded on the Sample Identification Key and chain of custody form. Labels will be written in indelible ink secured to the canister.

Equipment/Materials:

-
- Nitrile gloves
- Passivated SUMMA® Canister (or equivalent)
- Sample Identification Key
- Sample tags or labels
- Chain of custody
- Location map, field data from last sampling event (if available)
- Project Health & Safety Plan

6.5 SAMPLE HANDLING AND SHIPPING

Sample management is the continuous care given to each sample from the point of collection to receipt at the analytical laboratory. Good sample management ensures that samples are properly recorded, properly labeled, and not lost, broken, or exposed to conditions which may affect the sample's integrity.

All sample submissions must be accompanied with a chain of custody (COC) document to record sample collection and submission. Personnel performing sampling tasks must check the sample preparation and preservation requirements to ensure compliance with the Quality Assurance Project Plan.

The following sections provide the minimum standards for sample management.

6.5.1 Sample Handling

Prior to entering the field area where sampling is to be conducted, especially at sites with defined exclusion zones, the sampler should ensure that all materials necessary to complete the sampling are on hand. If samples must be maintained at a specified temperature after collection, dedicated coolers and ice must be available for use. Conversely, when sampling in cold weather, proper protection of water samples, trip blanks, and field blanks must be considered. Sample preservation will involve pH adjustment, cooling to 4°C, and sample filtration and preservation.

6.5.2 Sample Labeling

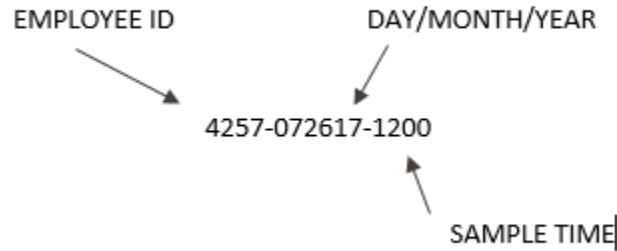
Samples must be properly labeled immediately upon collection.

Note that the data shown on the sample label is the minimum data required. The sample label data requirements are listed below for clarity.

- Project name.
- Sample number.
- Sampler's initials.
- Date of sample collection.
- Time of sample collection.
- Analysis required.
- Preservatives.

However, to ensure that samples are not confused, a clear notation should be made on the container with a permanent marker indicating the last three digits of the sample number. If the containers are too soiled for marking, the container can be put into a "zip lock" bag which can then be labeled.

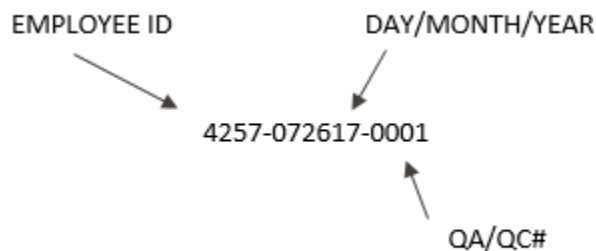
The unique sample identification number will follow the format below.



All sample names will be as follows:

- Employee ID
- Date: Enter the six-digit date when the sample was collected. Note that for one-digit days, months, and/or years, add zeros so that the format is mmddyy (050210). There should be NO slashes, dashes, or periods in the date.
- Time: Enter the four-digit time in MILITARY TIME. Note that for one-digit times a zero should be added to four digits, (i.e. 8 AM is 0800 military time, 1:30 PM is 1330). There should be NO colons, slashes, dashes, or periods in the time. This should match the time on the chain of custody. (Note: For Field Duplicates, Field Blanks, Equipment Blanks, Trip Blanks, and other QA/QC samples, sample time will NOT be used. This will simplify sample naming for the QA/QC samples and avoid identifying the parent sample for blind duplicates.

The unique sample identification number for QA/QC samples will follow the format below.



The QA/QC samples will be numbered consecutively as collected.

Examples of this naming convention are as follows:

Sample Name:	Comments
1234-050202-0001	TB
1234-050202-0002	TB
1234-050202-0003	FD

NOTE: The QA/QC Sample # resets to 0001 EACH DAY, this will avoid having to look back to the previous day for the correct sequential number.

6.5.3 Field Code

The field code will be written in the 'Comments' field on the chain of custody for EVERY sample, but will not be a part of the actual sample name. Enter the one/two-character code for type of sample (must be in CAPITALS):

N	Normal Field Sample
FD	Field Duplicate (note sample number (i.e. 0001) substituted for time)
TB	Trip Blank (note sample number (i.e. 0001) substituted for time)
EB	Equipment Blank (note sample number (i.e. 0001) substituted for time)
FB	Field Blank (note sample number (i.e. 0001) substituted for time)
KD	Known Duplicate
FS	Field Spike Sample
MS	Matrix Spike Sample (note on 'Comments' field of COC – laboratory to spike matrix.
MD	Matrix Spike Duplicate Sample (note on 'Comments' field of COC – laboratory to spike matrix.
RM	Reference Material

The sample labeling – both chain and sample bottles must be EXACTLY as detailed above. In addition, the Field Sample Key for each sample collected must be filled out

6.5.4 Packaging

Sample container preparation and packing for shipment should be completed in a well-organized and clean area, free of any potential cross contamination. The following is a list of standard guidelines which must be followed when packing samples for shipment.

- Double bag ice in "Zip Lock" bags.
- Double check to ensure trip and temperature blanks have been included for all shipments containing VOCs, or where otherwise specified in the QAPP.
- Enclose the Chain of Custody form in a "Zip Lock" bag.
- Ensure custody seals (two, minimum) are placed on each cooler. Coolers with hinged lids should have both seals placed on the opening edge of the lid. Coolers with "free" lids should have seals placed on opposite diagonal corners of the lid. Place clear tape over custody seals.
- Containers should be wiped clean of all debris/water using paper towels (paper towels must be disposed of with other contaminated materials).
- Clear, wide packing tape should be placed over the sample label for protection.
- Do not bulk pack. Each sample must be individually padded.
- Large glass containers (1 liter and up) require much more space between containers.
- Ice is not a packing material due to the reduction in volume when it melts.

Note: Never store sterile sample containers in enclosures containing equipment which use any form of fuel or volatile petroleum based product. When conducting sampling in freezing conditions at sites

without a heated storage area (free of potential cross contaminants), unused trip blanks should be isolated from coolers immediately after receipt. Trip blanks should be double bagged and kept from freezing.

6.5.5 Chain-of-Custody Records

Chain of custody (COC) forms will be completed for all samples collected. The form documents the transfer of sample containers. The COC record, completed at the time of sampling, will contain, but not be limited to, the sample number, date and time of sampling, and the name of the sampler. The COC document will be signed and dated by the sampler when transferring the samples.

Each sample cooler being shipped to the laboratory will contain a COC form. The cooler will be sealed properly for shipment. The laboratory will maintain a copy for their records. One copy will be returned with the data deliverables package.

The following list provides guidance for the completion and handling of all COCs:

- COCs used should be a Haley & Aldrich standard form or supplied by the analytical laboratory.
- COCs must be completed in black ball point ink only.
- COCs must be completed neatly using printed text.
- If a simple mistake is made, cross out the error with a single line and initial and date the correction.
- Each separate sample entry must be sequentially numbered.
- If numerous repetitive entries must be made in the same column, place a continuous vertical arrow between the first entry and the next different entry.
- When more than one COC form is used for a single shipment, each form must be consecutively numbered using the "Page ____ of ____" format.
- If necessary, place additional instructions directly onto the COC in the Comment Section. Do not enclose separate instructions.
- Include a contact name and phone number on the COC in case there is a problem with the shipment.
- Before using an acronym on a COC, define clearly the full interpretation of your designation [i.e., Polychlorinated Biphenyls (PCBs)].

6.5.6 Shipment

Prior to the start of the field sampling, the carrier should be contacted to determine if pickup at the field site location. If pick-up is not available at the Site, the nearest pick-up or drop off location should be determined. Sample shipments must not be left at unsecured drop locations.

Copies of all shipment manifests must be maintained in the field file.

7. Field Instruments – Use and Calibration

A significant number of field activities involve usage of electronic instruments to monitor for environmental conditions and health and safety purposes. It is imperative the instruments are used and maintained properly to optimize their performance and minimize the potential for inaccuracies in the data obtained. This section provides guidance on the usage, maintenance and calibration of electronic field equipment.

- All monitoring equipment will be in proper working order, and operated in accordance with manufacturer's recommendations.
- Field personnel will be responsible for insuring that the equipment is maintained and calibrated in the field in accordance with manufacturer's recommendations.
- Instruments will be operated only by personnel trained in the proper usage and calibration.
- Personnel must be aware of the range of conditions such as temperature and humidity for instrument operation. Usage of instruments in conditions outside these ranges will only proceed with approval of the Project Manager and/or Health and Safety Officer as appropriate.
- Instruments that contain radioactive source material, such as x-ray fluorescence (XRF) analyzers or moisture-density gauges require specific transportation, handling and usage procedures that are generally associated with a license from the Nuclear Regulatory Commission (NRC) or an NRC-Agreement State. Under no circumstance will operation of such instruments be allowed on site unless by properly authorized and trained personnel, using the proper personal dosimetry badges or monitoring instruments.

7.1 GENERAL PROCEDURE DISCUSSION

Decontamination activities must be performed in a controlled area outside any exclusion zones established on the site. Care must be taken to minimize the potential for transfer of contaminated materials to the ground or onto other materials. Regardless of the size or nature of the equipment being decontaminated, the process will utilize a series of steps that involve removal of gross material (dirt, grease, oil etc.), washing with a detergent, and multiple rinsing steps. In lieu of a series of washes and rinse steps, steam cleaning with low-volume, high-pressure equipment (i.e. steam cleaner) is acceptable.

Drill rigs, backhoes and other exploration equipment, and all monitoring equipment in contact with the sampling media must be decontaminated prior to initiating site activities, in-between exploration locations to minimize cross- contamination, and prior to mobilizing off site after completion of site work.

A decontamination pad must be constructed that is appropriate for the size and type of equipment being decontaminated. At a minimum, the decontamination pad will have the following elements:

- An impermeable barrier capable of containing decontaminated fluids;
- A low point where fluids will collect and can be transferred into appropriate containers;
- Durability to withstand equipment such as vehicle and foot traffic;

- Appropriate ancillary equipment such as racks to place decontaminated equipment to drain without further exposure to contaminated fluids; and
- Labels to alert personnel as to the potential presence of contaminated materials.

The following specific decontamination procedure is recommended for sampling equipment and tools:

- Brush loose soil off equipment;
- Wash equipment with laboratory grade detergent (i.e. Alconox or equivalent);
- Rinse with tap water;
- Rinse equipment with distilled water;
- Allow water to evaporate before reusing equipment; and
- Wrap equipment in aluminum foil when not being used.

7.2 DECONTAMINATION OF MONITORING EQUIPMENT

Because monitoring equipment is difficult to decontaminate, care should be exercised to prevent contamination. Sensitive monitoring instruments should be protected when they are at risk of exposure to contaminants. This may include enclosing them in plastic bags allowing an opening for the sample intake. Ventilation ports should not be covered.

If contamination does occur, decontamination of the equipment will be required; however, immersion in decontamination fluids is not possible. As such, care must be taken to wipe the instruments down with detergent-wetted wipes or sponges, and then with de-ionized water-wetted wipes or sponges.

7.3 DISPOSAL OF WASH SOLUTIONS AND CONTAMINATED EQUIPMENT

All contaminated wash water, rinses, solids and materials used in the decontamination process that cannot be effectively decontaminated (such as polyethylene sheeting) will be containerized and disposed of in accordance with applicable regulations. All containers will be labeled with an indelible marker as to contents and date of placement in the container, and any appropriate stickers required (such as PCBs). Storage of decontamination wastes on site will not exceed 90 days under any circumstances.

Equipment/Materials:

Decontamination equipment and solutions are generally selected based on ease of decontamination and disposability.

- Polyethylene sheeting;
- Metal racks to hold equipment;
- Soft-bristle scrub brushes or long-handle brushes for removing gross contamination and scrubbing with wash solutions;
- Large galvanized wash tubs, stock tanks, or wading pools for wash and rinse solutions;
- Plastic buckets or garden sprayers for rinse solutions;
- Large plastic garbage cans or other similar containers lined with plastic bags can be used to store contaminated clothing;
- Contaminated liquids and solids should be segregated and containerized in DOT-approved plastic or metal drums, appropriate for offsite shipping/disposal if necessary.

Reference:

1. ASTM D5088 - Practice for Decontamination of Field Equipment Used at Non-Radioactive Waste Sites

8. Investigation Derived Waste Disposal

8.1 RATIONALE/ASSUMPTIONS

This procedure applies to the disposition of investigation derived waste including soils and/or groundwater. Investigative derived wastes are dealt with following "Best Management Practices"; and are not considered a listed waste due to the lack of generator knowledge concerning chemical source, chemical origin, and timing of chemical introduction to the subsurface.

Consequently, waste sampling and characterization is performed to determine if the wastes exhibit a characteristic of hazardous waste. The disposal of soil cuttings, test pit soils and/or purged groundwater will be reviewed on a case by case basis prior to initiation of field activities. Two scenarios typically exist:

- When no information is available in the area of activity or investigation, and impacted media/soils are identified. Activities such as new construction and /or maintenance below grade may encounter environmental conditions that were unknown.
- Disposal Required/Containerization Required – When sufficient Site information regarding the investigative Site conditions warrant that all materials handled will be contained and disposed.

If a known listed hazardous and/or characteristically hazardous waste/contaminated environmental media is being handled, then handling must be performed in accordance with RCRA Subtitle C (reference 2, Part V, Section 1(a),(b),(c)).

The following outlines the waste characterization procedures to be employed when IDW disposal is required.

The following procedure describes the techniques for characterization of investigation derived waste (IDW) for disposal purposes. IDW may consist of soil cuttings (augering, boring, well installation soils, test pit soils), rock core or rock flour (from coring, reaming operations), groundwater (from well development, purging and sampling activities), decontamination fluids, personal protective equipment (PPE), and disposal equipment (DE).

8.2 PROCEDURE

The procedures for handling and characterization of field activity generated wastes are:

- A.) Soil/Rock Cuttings - Soils removed from boring activities and well construction tasks (including rock flour from bedrock coring) will be contained within an approved container, suitable for transportation and disposal.
- Once placed into the approved container, any free - liquids (i.e., groundwater) will be removed for disposal as waste fluids, or solidified within the approved container using a solidification agent such as speedy dri (or equivalent).
 - Contained soils will be screened for the presence of Volatile Organic Compounds (VOCs), using a Photo ionization detector (PID); this data will be logged for future reference.

- Once screened, full and closed; the container will be labeled and placed into the container storage area. At a minimum, the following information will be shown on each container label: date of filling/generation, Site name, source of soils (i.e., borehole or well), and contact.
 - Prior to container closure, representative samples from the containers will be collected for waste characterization purposes and submitted to the project laboratory.
 - Typically, at a location where an undetermined site-specific parameter group exists, sampling and analysis may consist of the full RCRA Waste Characterization (ignitability, corrosivity, reactivity, toxicity), or a subset of the above based upon data collected, historical information, and generator knowledge.
- B.) Groundwater - Well construction development, purging, and sampling groundwater, which requires disposal, will be contained.
- Containment may be performed in 55-gallon drums, tanks suitable for temporary storage (i.e., Nalgene tanks 500 to 1,000 gallons) or if large volumes of groundwater are anticipated, tanker trailer (5,000 to 10,000 gallons $\pm$), or drilling "Frac" tanks may be utilized (20,000 gallons $\pm$). In all cases the container/tank used for groundwater storage must be clean before use such that cross contamination does not occur.
- C.) Decon Waters/Decon Fluids - Decon waters and/or fluids will be segregated, contained, and disposed accordingly.
- Decon waters may be disposed of with the containerized groundwater once analytical results have been acquired.
- D.) PPE/DE – A number of disposal options exists for spent PPE/DE generated from investigation tasks. The options typically employed are:
- Immediately disposed of within on-Site dumpster/municipal trash; or
 - If known to be contaminated with RCRA hazardous waste, dispose off-Site at a RCRA Subtitle C facility.
 - Spent Solvent/Acid Rinses - The need for sampling must be determined in consultation with the waste management organization handling the materials. If known that only the solvent and/or acids are present, then direct disposal/treatment using media specific options may be possible without sampling (i.e. incineration).
 - PPE/DE – Typically not sampled and included with the disposal of the solid wastes.

Equipment/Materials:

- Sample spoons, trier, auger,
- Sample mixing bowl,
- Sampling bailer, or pump,
- Sample glassware.

References:

1. New York State Department of Environmental Conservation Technical Guidance for Site Investigation and Remediation, DER-10, (3 May 2010).
2. USEPA RCRA - Guidance and Policies: Management of Remediation Waste Under RCRA (October 1998).
3. USEPA RCRA - Management of Contaminated Media (October 1998).
4. USEPA CERCLA Guidance (Options Relevant to RCRA Facilities): Guide to Management of Investigation - Derived Wastes (January 1992).
5. USEPA Office of Solid Waste- SW846 Chapter 9 Sampling Plan, Chapter 10 Sampling Methods (September 1986).
6. The Occupational Safety and Health Administration's (OSHA) Excavation and Trenching Standard Title 29 of the Code of Federal Regulation (CFR) Part 1926.650

APPENDIX A

Field Forms

DAILY FIELD REPORT

Page of

Project

Report No. 20

Location

Date _____

Client

Page _____ of _____

Contractor

File No.

Weather

Temperature

Field Representative(s)

Time on site

Report/Travel/Other**Total hours****Distribution:**

Haley & Aldrich, Inc.

EQUIPMENT CALIBRATION LOG

Project:

Location:

Model Name:

Model Number:

Serial Number:

Cal. Standards:

Instruments will be calibrated in accordance with manufacturer's recommendations at least once per day.

[illegible]**Other Comments:**

LOW FLOW/MNA FIELD SAMPLING FORM

Page of

PROJECT _____
 LOCATION _____
 CLIENT _____

H&A FILE NO. _____

PROJECT MGR. _____

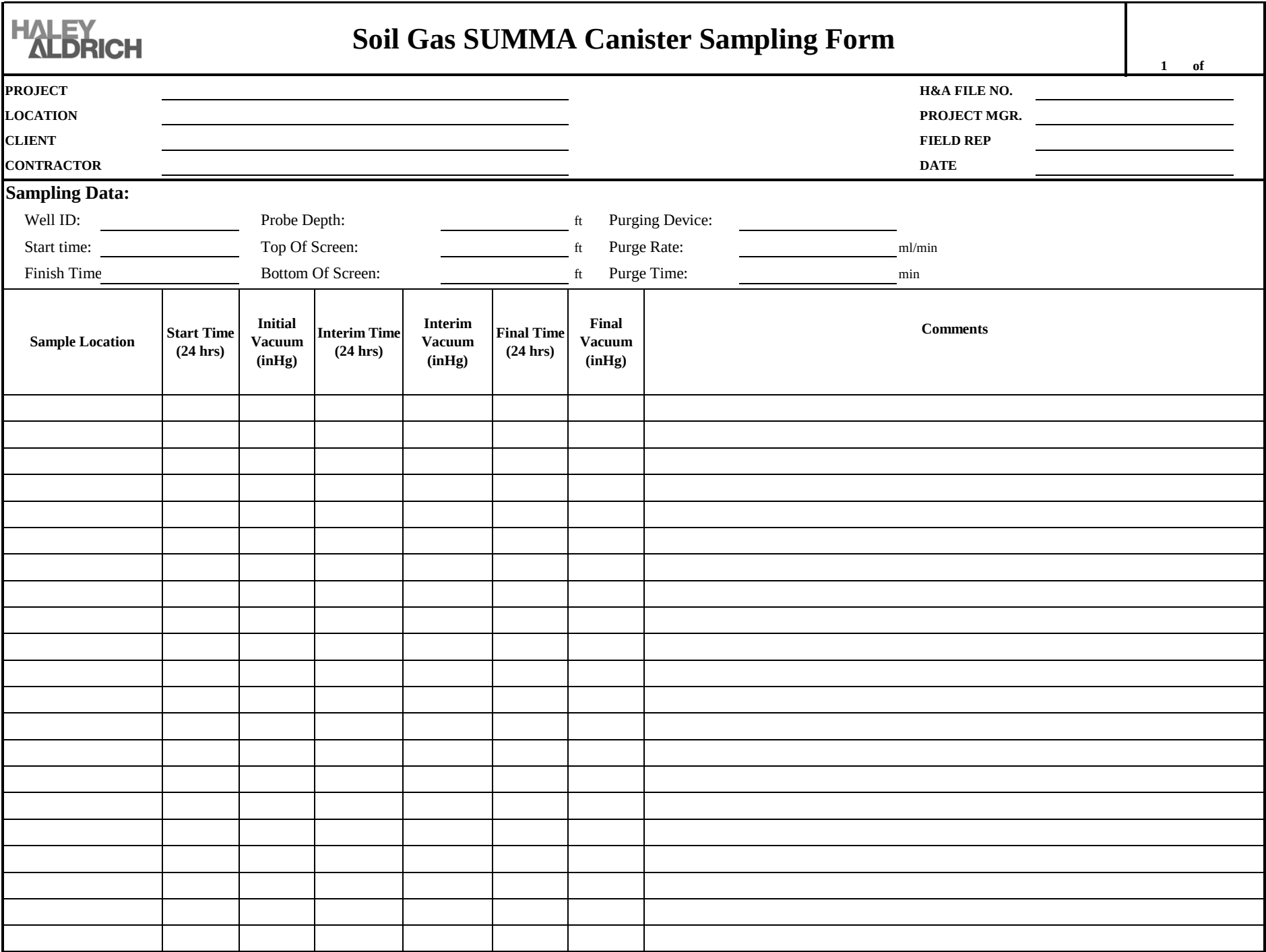
FIELD REP. _____

SAMPLING DATE _____

Sampling Data:

Well ID:	Well Depth:	ft	Initial Depth To Water:	ft	Purging Device:	
Start time:	Depth To Top Of Screen:	ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	Yes No
Finish Time:	Depth To Bottom Of Scree	ft	Date Well Installed:		Tubing Type:	

[illegible]





Page of

PROJECT MGR.

[illegible]

Notes:

Common Sample Type Codes:

N Normal Environmental Sample WG Groundwater

WS Surface Water

SO Soil

GS Soil Gas

SE Sediment

APPENDIX I

Health and Safety Plan



HALEY & ALDRICH, INC.
SITE-SPECIFIC HEALTH & SAFETY PLAN

For

Former AB Dick Facility – BCP Site #C828148 Remediation Project

811 Jefferson Road Rochester, New York

Project/File No. 128437-010

Prepared by: Thomas Robitaille

Date: 03/04/2016

Revised by: Santa McKenna

Date: 7/31/2017

APPROVALS: The following signatures constitute approval of this Health & Safety Plan

Margaret Holt - Local H&S Coordinator

Date

Janice Szucs - Project Manager

Date

Note: This HASP has been developed for Haley & Aldrich purposes only and is not for use by others.

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APPENDIX A - HASP AMENDMENT FORM**APPENDIX B – ISSUANCE AND COMPLIANCE, SITE SAFETY OFFICER ROLES AND RESPONSIBILITIES, AND TRAINING REQUIREMENTS**

1. PROJECT INFORMATION AND EMERGENCY RESOURCES

Project Name: BCP Site #C828148 Remediation Project		H&A File No.: 128437-010
Location: Former AB Dick Facility		
Client/Site Contact: Phone Number: Emergency Phone Number:	811 Jefferson Rd, LLC c/o Marshall C. Hardy, JM Inc. 585.905.0970 Cell 585.857.6746	
H&A Project Manager: Phone Number: Emergency Phone Number:	Janice Szucs 585.321.4211 585.315.4761 (cell)	
Local Health & Safety Coordinator: Office Phone Number: Emergency Phone Number:	Margaret Holt 585-321-4214 585-721-2426 (cell)	
Nearest Hospital: Address: (see map on next page) Phone Number:	Strong Memorial Hospital 601 Elmwood Ave 275-4551 Emergency Room	
Nearest Liberty Mutual Clinic: Address: (see attached map) Phone Number: Liberty Mutual Claim Policy	Strong Memorial Hospital Occupational Health 400 Red Creek DR. Suite 220 Rochester, NY 14623 Phone 585-487-1000 WC7Z11254100036	
Emergency Response Number:	911	
Other Ambulance, Fire, Police, or Environmental Emergency Resources:	359-7065 Town of Henrietta Fire Marshall 226-2466 NYSDEC Region 8 Office	

Work Scope:

This Site-Specific Health and Safety Plan address the health and safety practices and procedures that will be employed by all Haley & Aldrich (H&A) employees participating in the Site Management Plan (SMP) activities at the Project Site. This plan is based on an assessment of the site-specific health and safety risks available to Haley & Aldrich and Haley & Aldrich's experience with other project sites. The scope of work for this project could include:

H&A personnel to conduct semi-annual groundwater monitoring and sampling to monitor performance of the remedial action, which included excavation, in-situ chemical reduction (ISCR) and biodegradation of the residual Site COCs.

H&A personnel will also be responsible for excavation oversight and collection of excavation area and disposal samples (if necessary) for excavation work completed under the Excavation Work Plan portion of the SMP. Detailed sampling plans should be provided in a task specific Work Plan. Excavated soil will be temporarily placed in secure stockpiles on the Site pending characterization and off-Site disposal at licensed waste management facilities. Stockpiles will be inspected at least weekly and after each storm event. Representative samples of the stockpiled impacted material will be sampled and analyzed

as necessary for off-Site disposal as solid or hazardous waste at licensed waste management facilities. When excavation activities occur, H&A personnel will implement Community Air Monitoring according to the NYSDOH generic Community Air Monitoring Plan (CAMP). This plan requires real-time monitoring of VOCs and particulates at the upwind and downwind perimeter of designated work areas when certain activities are in progress.

Projected Start Date(s):

- TBD

Projected Completion Date:

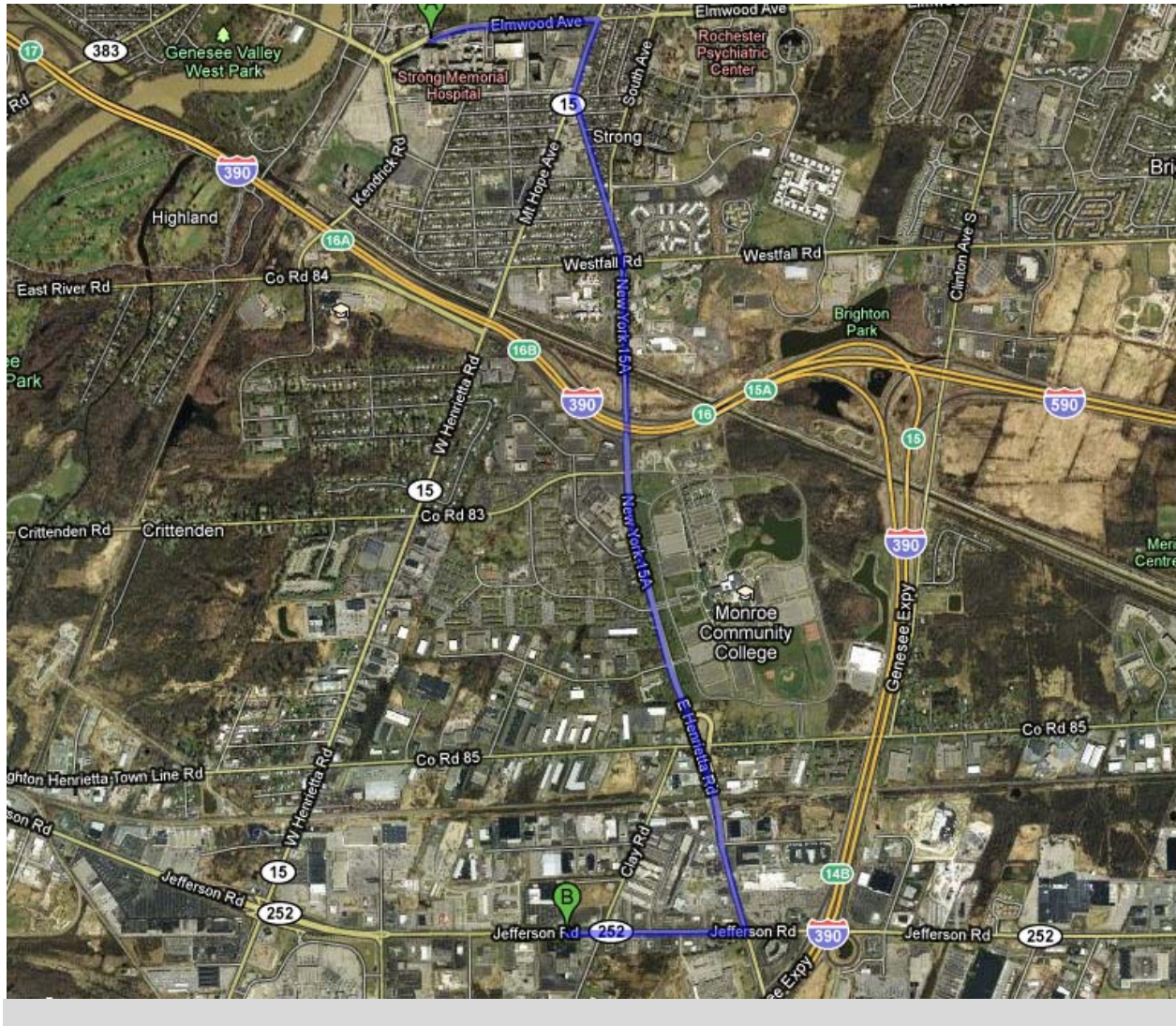
- TBD

Estimated Number of Days to Complete Field Work:

- Groundwater monitoring and sampling: 3-6 Days
- Excavation oversight and soil sampling: TBD

Directions to the Nearest Hospital:

Strong Memorial Hospital, 601 Elmwood Avenue, Rochester, New York



2. SITE DESCRIPTION**Site Classification: Brownfield Cleanup Project**

☐ Industrial	☐ Commercial	☒ Other Former Industrial Site

General Description:

The Site is located at 811 Jefferson Road in the Town of Henrietta, Monroe County, New York (Drawing G-100). The property (Tax I.D. No. 162.09-1-3) is currently zoned within a Commercial/Industrial Zoning District and is owned by 811 Jefferson Road, LLC (Participant). The Site is approximately 12.2 acres in size comprised of an approximate 11.9-acre parcel of vacant land that was last leased from the Participant and/or its predecessors for industrial use by the AB Dick Company, and an approximate 0.3-acre stormwater drainage ditch which Participant recently acquired from the neighboring property owner Unither. The Site boundaries are shown on the attached site figure relative to the former building layout including pavements and former floor slabs and foundations that remain in place over a portion of the Site. Jefferson Road and a Denny's Restaurant bound the Site to the north. The Denny's restaurant and Clay Road bound the site to the east. The Unither property with its biopharmaceutical manufacturing facility, office building and associated parking lots, driveways and lawns bounds the Site on the south and west.

Site History and Remediation Activities:

The Site is currently unimproved except for sections of concrete floor slabs remaining from prior development. The Site formerly contained a manufacturing building with additions, which were occupied by a series of industrial operations from the mid-1950s to 2005. Manufacturing activities conducted at the property included cleaning/degreasing of metal parts and equipment. The AB Dick Company, Itek Corporation, and Photostat Corporation leased and occupied the building and property from 1955 through 2004. In November 2004, the AB Dick Company sublet the building to Silver Acquisition Corp., Inc. (also known as ABDI International Inc.) which occupied the premises until June 2005.

The former building was comprised of a 167,200± square feet (sq. ft.) slab on grade first floor that included both office and industrial areas and a 27,200± sq. ft. second floor office area. The former building was constructed in 1955-1956 with additions in 1968 and 1979. The building was razed and all waste and demolition debris were removed in early 2007 in anticipation of commercial redevelopment. A portion of the former building's slab and a contiguous portion of the asphalt parking lot pavement, which cover a 3±-acre area at the southwest corner of the Site, were left in place to serve as a surface cover over an area of soil and groundwater impacts identified during previous Site investigations.

In accordance with the Brownfield Cleanup Program Agreement, the Participant has undertaken a Remedial Investigation (RI) program at the Site consistent with the applicable NYSDEC Brownfield Cleanup Program regulations and related guidance. The RI activities characterized and delineated the nature and extent of Site-related contamination that was first identified in the Phase I/Phase II Environmental Site Assessment Report for the Former AB Dick Facility (Stantec, March 2007). The RI activities also included assessments of potential source areas that had not been previously

investigated. The initial RI activities were conducted from May 2008 through May 2009. Supplemental investigation activities were conducted from May through August 2010. Initial RI and supplemental investigation activities were conducted in accordance with NYSDEC-approved work plans and results documented in NYSDEC-approved RIR and SIR reports (Stantec, October 2010). A Pre-Design Assessment (Haley & Aldrich, 2011) supporting the chemical treatment component of the selected remedy documents the efficacy of naturally occurring microorganisms to attenuate the Site's COCs.

The RI identified the COCs for the Site, including trichloroethylene, tetrachloroethylene, and their daughter products, cis-1,2-dichloroethene and vinyl chloride. The RI detected the COCs in soil and groundwater at concentrations above the applicable NYSDEC SCGs in two locations, Area 1 on the Site and Area 2 on both the Site and off-site on the adjacent property occupied by Unither, as shown on attached site figure. These areas are described as follows:

- Area 1 is located in and adjacent to the southwest corner of the former manufacturing facility building where Site-related COCs were identified in soil and groundwater at concentrations above Site cleanup goals. The RI findings indicate that the Area 1 impacts are likely related to a release(s) of chlorinated solvent compounds used in industrial cleaning operations of one or more of the prior Site tenants which were released from the former building's storage areas, sub-floor piping and/or a former underground storage tank related to those operations.
- Area 2 is located at the outfall of a former 36-inch diameter stormwater pipe that runs from the former on-Site building's roof drains to the drainage ditch which runs east-west along the southern property line. Area 2 extends on Unither's property just to the south of the southern property boundary of the Site, as shown in plan and profile on attached site Figure, where a plume of groundwater containing Site-related COCs above applicable NYSDEC SCGs extends southwest to the loading dock apron for Unither Building 3.
- An additional isolated area of shallow soil impact from petroleum substances was also identified on the Site during the RI program and subsequently addressed by removal and off-Site disposal, as documented in the 30 August 2013 IRM Completion Report approved by the NYSDEC in November 2013.

During 2017, Participant conducted a remedial action under the NYSDEC-approved Remedial Action Work Plan (RAWP), dated January 2017. The following remediation activities were completed to address contamination in Area 1, Area 2 and the area south of Area 2 on Unither's property:

- (1) Excavation and off-site disposal of contaminant source area sediments and soils in Area 1 and Area 2, to the extent feasible.
- (2) Injection of in-situ chemical reduction (ISCR) amendments consisting of zero valent iron (ZVI), emulsified vegetable oil (EVO) and emulsified zero valent iron (EZVI) below the planned excavation limits before the excavation to treat COCs in subsurface soil below the water table and the groundwater. ZVI was also mixed into exposed soils following the soil excavation program and prior to backfilling.

Overview of Hazards:

The Site soils and groundwater are known to contain TCE and PCE at concentrations greater than 10 ppm at the AB Dick property. Personnel Protective Equipment will be required to limit exposure to volatile compounds via dermal adsorption and/or inhalation.

Any access required to the south of Area 2 will need to be coordinated and cleared with UCB/Unither security personnel.

Site Status: Indicate current activity status and describe operations at the site.

☐ Active	☒ Inactive
☐ Partially active	☐ Other

Site is currently vacant and gates restrict access; remediation site activity will include truck activity, heavy equipment traffic in travel areas throughout work day.

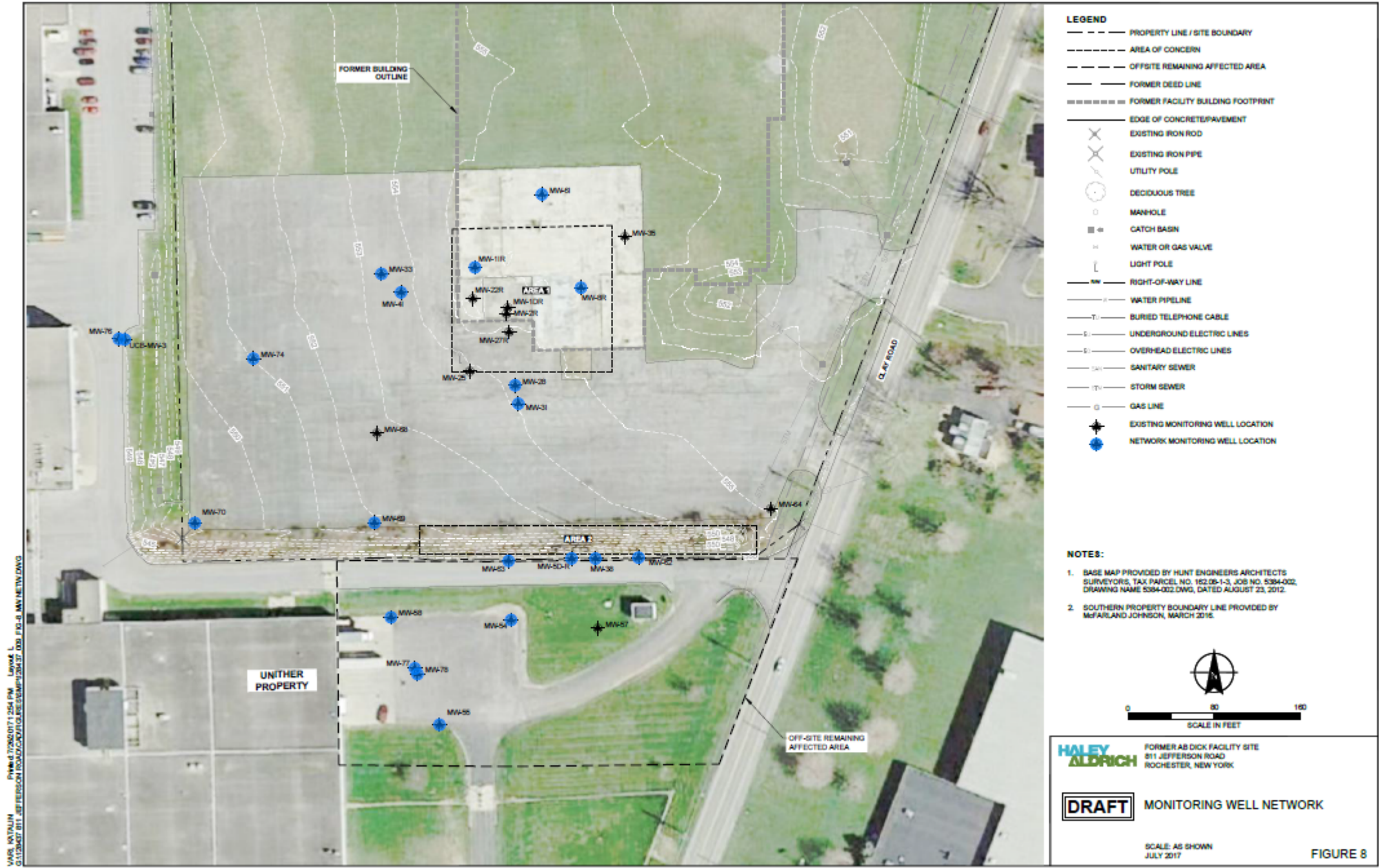
Site Plan:

Is a site plan or sketch available? ☒ Y ☐ N

Work Areas (see site plans)

List/identify each specific work area(s) on the job site and indicate its location(s) on the site plan:

1. Area 1 – Located in center of site plan (see next page)
2. Area 2 – Located in bottom center portion of site plan (see next page)



3. PROJECT TASK BREAKDOWN

List and describe each distinct work task below.

Task No.	Detailed Task Description	Employee(s)	Anticipated Work Date(s) or Duration
1	Groundwater Monitoring/Sampling Events	TBD	Semi-annual
2	Excavation Oversight	TBD	TBD
3	Soil disposal (stockpile) sampling	TBD	TBD
4	CAMP monitoring	TBD	TBD

4. HAZARD ASSESSMENT

Safety Data Sheets (SDS) of hazardous materials used during the execution of work shall be available on site. SDS are required for chemicals used to prepare samples, calibration gases, etc. SDS are not required for waste materials.

Chemical Hazards:

Does chemical analysis data indicate that the site is contaminated? ☒ Y ☐ N

No data exists for potential presence of contamination at the neighboring site UCB however there was previously a documented release of methylene chloride on the property that was the subject of a NYSDEC spill report and cleanup activity.

Indicate the potential physical state of the hazardous materials at the site.

☒ Gas/Vapor	☐ Sludge
☒ Liquid	☒ Solid/Particulate

Indicate the anticipated or actual class of compounds at the site.

☐ Asbestos	☐ Inorganics
☐ BTEX	☐ Pesticides
☒ Chlorinated Solvents	☐ Petroleum products
☐ Heavy Metals	☐ Other Specify

Impacted Environments:

Indicate media in which contamination is expected.

☒ Air	☒ Groundwater
☒ Soil	☒ Sediment
☐ Surface water	☐ Other Specify

Estimated concentrations:

Indicate medium of major chemicals expected to be encountered by onsite personnel.

No data is available for potential contamination on the UCB site.

Work Activity	Media	Chemical	Anticipated Concentration
Soil Sampling	S, GW, A	Chlorinated solvents including TCE, PCE, DCE, Vinyl Chloride	TCE, PCE (10 ppm or greater possible in all media) Vinyl Chloride, DCE (1-10 ppm or greater possible in all media)
CAMP monitoring	A		
Excavation Oversight	S, GW, A		
Groundwater Sampling	GW		

(Media key: A = Air; GW = Groundwater; SW = Surface Water; SO = Soil; SE = Sediment)

**TABLE 1
HAZARD MONITORING**

(CIRCLE CONTAMINANTS OF CONCERN, WRITE ADDITIONAL CONTAMINANTS AND EXPOSURE ON LAST PAGE)

CONTAMINANTS OF CONCERN	ROUTES OF EXPOSURE	IDLH	PEL	TLV	PID (IP eV)	FID	ODOR THRES-HOLD	IRRITATION THRESHOLD	ODOR DESCRIPTION
Benzene	R,A,I,C	Ca	1	Sk 0.5	9.25	150	4.68	--	Solvent
1,1-Dichloroethylene (Vinylidene chloride, 1,1-DCE)	R,I	Ca	--	5 Cv 20	*	40	190	--	--
1,2-Dichloroethylene	R,I,C	1000	200	200 Cv 125 100	9.65	50	0.85	--	Ether-like acrid
Ethylbenzene	R,I,C	800	100		8.76	100	2.3	E 200	Aromatic
Methyl Chloroform (1,1,1-TCA)	R,I,C	700	350	350	**	105	20-100	--	Chloroform-like
Methylene Chloride (Dichloromethane, Methylene dichloride)	R,I,C	Ca	25	50	11.35**	100	25-50	E 5000	Ether-like
Stoddard Solvent (Mineral Spirits)	R,Cl,I	20000 mg/m ³	500	100	*	--	1	E 400	Kerosene-like
1,1,2,2-Tetrachloroethane	R,A,I,C	Ca (100)	Sk 5	1	11.1**	100	1.5	--	--
Tetrachloroethylene (Perchloroethylene)	R,I,C	Ca	100	25	9.32	70	4.68	N.T513-690	Ether, chloroform-like
Toluene	R,A,I,C	500	200	50	8.82	110	2.14	E300-400	Mothball-like
Trichloroethylene Vinyl Chloride	R,I,C	Ca (1000)	100	50	9.47	70	21.4	--	Solventy, chloroform-like
	R	Ca	1	2	9.995	--	3000	--	Ethereal
Xylenes	R,A,I,C	1000	100	100	8.56/8.44	111/116	1.1	E.N.T. 200	Aromatic

Chemicals of Concern:

Trichloroethylene (TCE)

Trichloroethylene (TCE) is a colorless, nonflammable, non-corrosive liquid has a “sweet” odor characteristic of some chlorinated hydrocarbons.

The compound is incompatible with strong caustics, it reacts with aluminum when acidic, and it is incompatible with active metals - barium, lithium, sodium, magnesium, and titanium. Decomposition of TCE, due to contact with hot metal or ultraviolet radiation, forms products including chlorine gas, hydrogen chloride, and phosgene. Dichloroacetylene may be formed from the reaction of alkali with TCE.

The OSHA PEL for TCE is 100 ppm as an 8-hour TWA; an acceptable ceiling concentration of 200 ppm; and an acceptable maximum peak ceiling of 300 ppm for no more than 5 minutes in any 2-hour period. The standard routes of entry in the body are through inhalation, percutaneous absorption, ingestion, skin and eye contact. The points of attack are the respiratory system, heart, liver, kidneys, central nervous system and skin.

Exposure to TCE vapor may cause irritation of the eyes, nose, and throat. The liquid, if splashed in the eyes, may cause burning irritation and damage. Repeated or prolonged skin contact with the liquid may cause dermatitis. Acute exposure to TCE depresses the central nervous system exhibiting such symptoms as headache, dizziness, vertigo, tremors, nausea and vomiting, irregular heartbeat, sleepiness, fatigue, blurred vision, and intoxication similar to that of alcohol. Unconsciousness and death have been reported. Alcohol may make the symptoms of TCE overexposure worse. If alcohol has been consumed, the overexposed worker may become flushed. TCE addiction and peripheral neuropathy have been reported.

Physical Hazards:

Indicate all hazards that may be present for each task. If any of these potential hazards are checked, it is the project manager’s responsibility to determine how to eliminate/minimize the hazard to protect onsite personnel.

Copy and paste a checkmark “✓” into appropriate boxes.

Potential Job Hazards	Task 1	Task 2	Task 3	Task 4
	GW Monitoring / Sampling	Excavation Oversight	Soil Disposal Sampling	CAMP monitoring
Confined space entry*				
Underground utilities		✓		
Overhead utilities		✓		
Electrical hazards		✓		
Excavations greater than 4’ depth		✓		
Open excavation fall hazards		✓		
Heavy equipment		✓		✓
Drilling hazards		✓		

Noise (above 85 dBA)		✓		
Traffic concerns	✓	✓	✓	✓
Extreme weather conditions	✓	✓	✓	✓
Rough terrain for drilling equipment		✓		
Buried drums				
Heavy lifting (more than 50 lbs.)				✓
High risk fire hazard				
Poisonous insects or plants	✓	✓	✓	✓
Water hazards				
Use of a boat				
Lockout/Tagout requirements				
Other: Specify				

***CONFINED SPACE ENTRY REQUIRES SPECIAL PROCEDURES, PERMITS AND TRAINING AND MUST BE APPROVED BY THE CORPORATE HEALTH & SAFETY MANAGER.**

Potential Activity Hazards and Hazard Controls:

Copy and paste a checkmark “✓” adjacent to potential activity hazards and relevant hazard controls.

POTENTIAL ACTIVITY HAZARDS

Abrasions and Cuts	Fueling and Fuel Storage	Overloaded Equipment
Access	Fugitive Dust	Oxygen deficiency
Asphyxiation	Fumes	Pinch Points
Bacteria	Generated Wastes ✓	Poisonous Plants ✓
Biological Hazards	Guards removed	Pressure
Bloodborne Pathogens	Hazardous Materials ✓	Pressurized Lines
Cave Ins	Heat Stress (cramps, exhaustion, stroke) ✓	Radiation
Chemical/Thermal Burns	Heavy Equipment Operation ✓	Repetitive Motion
Chemicals ✓	Heavy Equipment/Stability	Rigging - Improper
Cold Stress ✓	Heavy Lifting ✓	Sharp Objects
Compressed Gases	High crime area (violence)	Silicosis
Confined Spaces	High Winds	Slips, Trips, and Falls ✓
Congestion	Hoists, Rigging, Slings, Cables	Sprains and Strains ✓
Defective Equipment ✓	Housekeeping – Improper ✓	Steam
Dermatitis ✓	Illumination - Poor	Sunburn ✓
Dropping Materials/Tools to Lower Levels	Impact	Surface Water Run-off ✓
Drowning or Flowing Water	Inability to Maintain Communication	Toxicity ✓
Electrical Shock	Inclement Weather ✓	Traffic
Energized Equipment ✓	Inclines	Underground Utilities
Equipment Misuse ✓	Insects/Reptiles	Uneven Terrain ✓
Ergonomics	Mold	Unsafe Atmosphere
Excavations	Moving Equipment, Conveyors or Vehicles ✓	Vibration
Explosions	Muddy Site Conditions ✓	Visibility - Poor
Fatigue ✓	New Personnel	Visitors Known/Unknown
Fire	Noise	VOC Emissions
Flammability	Odor	Weight
Flying debris	Overhead Utilities	Work at Depth
Foreign Body in Eye ✓	Overhead Work	Work at Heights
Frostbite/Cold		Work over Water
		Working on Ice

HAZARD CONTROLS

Air Monitoring
 Appropriate Clothing/Monitoring Of Weather ✓
 Appropriate Labels/Signage
 Barricades/Fencing/Silt Fencing
 Buddy System - Attendant
 Chock Blocks
 Confined Space Procedures
 Decontamination Procedures ✓
 Derived Waste Management Plan ✓
 Drinking Water/Fluids ✓
 Dust Abatement Measures
 Emergency Action Plan Procedures
 Equipment Inspection
 Equipment Manuals/Training
 Exclusion/Work Zones
 Exhaust Ventilation
 Eye Protection ✓

Fall Protection
 Fire Extinguisher ✓
 Flotation Devices/Lifelines
 Gloves ✓
 Ground Fault Interrupter
 Grounded Hydraulic Attachments
 Grounded Equipment/Tanks
 Hand Signal Communication
 Hard Hat ✓
 Hazardous/Flammable Material Storage ✓
 Hearing Protection
 High Visibility Safety Vest ✓
 Hoses, Access to Water
 Hot work Procedures
 Isolation of Energy
 Sources(Lockout/Tagout)
 Machine/Equipment Guards

Manual Lifting Equipment
 Police Detail
 Proper Lifting Techniques
 Proper Tool for Job ✓
 Proper Work Position/Tools
 Protective Equipment ✓
 Radio Communication
 Respirator, (Half Mask)
 Safety Harness /Lanyard/Scaffold
 Security Escort
 Sloping, Shoring, Trench Box
 Spill Prevention Measures
 Spill Kits
 Stormwater Control
 Traffic Controls
 Procedures/Methods
 Vehicle Inspection
 Visitor Orientation Escort
 Window Cleaning/Defrost

Daily Safe Work Practices:

- Personnel under the obvious influence of alcohol or controlled substances are not allowed onsite; those taking medications must notify the SHSO.
- Personnel will avoid skin contact with contaminated or potentially contaminated media. If such contact occurs, the affected areas should be washed thoroughly with soap and water.
- Personnel will discard and replace any damaged or heavily soiled protective clothing. Discarded PPE will be drummed at the end of each day.
- Personnel should notify the SHSO of any defective monitoring, emergency, or other protective/safety equipment.
- A supply of potable water, electrolyte replacement solutions, shaded break area, and sufficient lighting will be maintained onsite; sanitary facilities will be accessible to personnel.
- All unsafe conditions shall be made safe immediately. All unsafe conditions not in the scope of the project shall be reported to the PM and the condition corrected.
- All site personnel will familiarize themselves with these and the emergency procedures during daily tailgate and pre-work safety meetings.
- Following safe work practices reduces the likelihood of an accident, illness, or injury during field activities.
- Workers who are passengers or drivers of vehicles (both offsite and onsite) will wear their seat belts any time the vehicle is in motion.
- Store tools in clean, secure areas so they will not be damaged, lost, or stolen.

Decontamination (Equipment)

The equipment decontamination procedures for this project:

- Sample collection equipment (bailers, collection utensils, etc.) will be decontaminated before initial use, between samples, and before leaving the site with a non-phosphate detergent wash and/or high-pressure steam, tap water rinse, and final triplicate de-ionized water rinse.
- After decontamination, sample collection equipment will not be transported to the sampling location on unclean surfaces (e.g., transport in or on new plastic).

- Monitor well development/purge pumps will be decontaminated before and after use in each well with a non-phosphate detergent water wash, tap water rinse, and final de-ionized water rinse. This wash and rinse sequence will be circulated through the pump system and applied to exterior surfaces that will be or have been in contact with groundwater.

Utility Locators and Underground Hazards

Prior to drilling or excavating, Haley & Aldrich staff members will ensure that permission has been gained from the property owner to access the property. Contact site facilities personnel to assist with location of underground utilities. Before marking any proposed exploration location, it is critical that all readily available information on underground utilities and structures be obtained. The estimated location of utility installations, such as gas, electric, fuel, steam, sewer, telephone, fiber optic, water, drainage or any other underground installation that may be expected to be encountered during drilling work, will be identified with the appropriate authority. Appropriate authorities include client representatives, utility companies, nonprofit organizations (e.g., "Dig-Safe), and others.

Heavy Equipment

Staff Members must be especially careful and alert when working with contractors who use heavy equipment, since equipment failure or breakage can lead to accidents and worker injury. Cranes and equipment for drilling, pile driving, test pitting and excavation is of special concern. Should these devices fail during operation the likelihood of worker injury is high. Equipment of this nature should be visually inspected and checked for proper working order prior to the commencement of field work. Those that operate heavy equipment must meet all of the requirements to operate heavy equipment. Haley & Aldrich, Inc. staff members that supervise projects or are associated with such high-risk projects that involve digging should use due diligence when working with a construction firm. Maintain visual contact with operators at all times and keep out of the strike zone whenever possible. Always approach heavy equipment with an awareness of the swing radius and traffic routes of each piece of equipment and never go beneath a hoisted load. High-visibility safety vests must be worn onsite at all times. Avoid fumes created by heavy equipment exhaust.

Noise Reduction

Site activities in proximity to heavy equipment often expose workers to excessive noise. It is anticipated that situations may arise when noise levels may exceed the OSHA Action Level of 85 dBA in an 8-hour time-weighted average (TWA). An example of this possibility is working in close proximity to the subcontractor during drilling activities onsite. If excessive noise levels occur, efforts will be made to control this by issuance of earplugs to all personnel and by implementing a system of hand signals understood by all.

Work Site Access & Controls (Standard Precautions)

Excavations

Staff Members must be especially careful and alert when working with contractors who use heavy equipment, since equipment failure or breakage can lead to accidents and serious worker injury. Equipment with a fast or wide swing radius should be of special concern. Should these devices fail during operation the likelihood of worker injury is high. Those that operate heavy equipment must

meet all of the requirements to operate heavy equipment. Haley & Aldrich, Inc. staff members that supervise projects or are associated with such high-risk projects that involve digging should use due diligence when working with a construction firm.

- Excavations greater than 5' in depth are not to be entered unless properly sloped, shored, or benched. Heavy equipment operators are responsible for the safety of the excavation. Operators must be deemed a competent person per OSHA regulations and shall ensure that the excavation is safe to enter if any H&A staff member is to enter the hole. H&A staff members are to consult with the competent person prior to entering any excavation. This means that the hole must be sloped, shored or benched in accordance to OSHA's Construction Standard for excavations.
- No H&A staff member is to enter the excavation unless they have determined that there is no potential for injury such as cave ins.
- It is the contractor's responsibility to safe guard all effected workers from falling into any excavation by the use of barrier's and warning signs.
- No excavation is to be left open, unattended when there is a possibility for workers to fall into the excavation. Barricades must be placed around the hole at night when the depth is greater than 4'. This is responsibility of the contractor.
- Keep all equipment at a minimum of 10' away from energized electrical lines.
- H&A staff members will be required to wear an orange safety vest while in the immediate area where heavy equipment is being used.

Excavation and Trenching Safety

The following is a list of minimum requirements for trenching and excavating. Each excavation/trench/shoring project is different, therefore the Contractor/Consultant Project Manager is responsible for evaluating site specific conditions and making appropriate provisions in the task-specific health and safety requirements in conformance with 29 CFR 1926 Subpart P - Excavations.

- Contractor will contact the proper utilities to obtain clearance. Prior to work, review the utilities in the area and be sure they have been staked properly.
- Be aware that trenches and excavations deeper than five feet require additional safety precautions, such as shoring.
- The walls and faces of all excavations and trenches more than five feet deep, in which an staff member is exposed to danger from moving ground, will be guarded by a shoring system, sloping of the ground, or some other equivalent means.
- For excavations or trenches in which a staff member may be required to enter, excavated or other material will be effectively stored and retained at least two feet or more from the edge of the excavation or trench.
- The Contractor/Consultant Site Coordinator will make daily inspections of excavations. If evidence of possible cave-ins or slides is apparent, all work in the excavation will cease until the necessary precautions have been taken to safeguard staff members.

- Trenches more than four feet deep will have ladders or steps located so as to require no more than 25 feet of lateral travel to exit.
- Hard hats and other personal protective equipment will be worn at all times during any type of excavating or trenching operation.
- Determine soil composition (e.g., through soil sampling, soil maps, etc.) and other relevant site conditions, with special emphasis on conditions conducive to cave-ins.
- Monitor the atmosphere in and around trenches on a regular basis to check for explosive, toxic or otherwise dangerous gases and vapors.
- The Contractor/Consultant Project Manager will insure that all staff members involved in the excavation activity have appropriate training in safe trenching practices, with emphasis on factors such as:
 - utility line identification
 - cave-in prevention measures
 - recognition of conditions which may cause cave-ins
 - means of egress from trench
- Water will not be allowed to accumulate in any excavation. Utilize ditches, dikes, pumps, or other means to keep surface water out of trenches.
- All open excavations must be well marked and barricaded.

Excavation Cave-In Hazards

- The following conditions increase the likelihood of cave-in: Soil materials composed of unconsolidated, uncompacted, and/or rounded particles (See 29 CFR 1926 Subpart P - Excavation Standard). Special care must be used when trenching in areas that have previously been excavated and backfilled.
- Soils, which have a high water, content, or have been subjected to freeze-thaw or frost-heaving.
- Loading of trench walls by adjacent equipment, supplies, structures, "back-dirt" piles, etc.
- Vibration due to equipment operating near excavations.
- Trench walls that are steeper than the angle of repose of the material composing the walls.
- Deep trenches (i.e., high trench walls).
 - The following precautions should be used to prevent cave-ins in all trenches in excess of 4 ft. deep. These precautions should also be used in trenches less than 4 ft. deep whenever those site conditions just listed indicate the likelihood of a cave-in:
 - Sloping: Trench walls should be sloped to the correct angle of repose.

- **Shoring:** Vertical trench walls (unless composed of solid rock) must be shored and braced, or restrained with movable trench boxes, to prevent cave-in. A registered professional engineer must design shoring systems and meet accepted engineering requirements.

The work area is restricted to authorized personnel. Clearly define the work area before beginning activities for the day. Caution tape and safety cones must be provided as necessary for vehicular traffic concerns and to protect passers-by. Proper housekeeping is essential to avoid creating hazards to pedestrian and vehicular traffic. Excavations in progress will not be left unattended at any time. Running equipment will not be left unattended at any time. Test borings and test pits will be backfilled upon completion and the area restored. Drilling equipment and heavy construction equipment will be secured above test borings or excavations during work stoppages and at the end of the workday.

Site Security

Site activities will be conducted with the permission of the property owner. Site access by vehicle restricted by locking gates.

Weather Related Hazards

Heat Stress

Heat stress on hazardous waste sites or construction sites usually is a result of protective clothing decreasing natural body ventilation, although it may occur at any time work is being performed at elevated ambient temperatures. Because heat stress is one of the most common and potentially serious illnesses associated with hazardous waste site work, regular monitoring and other preventative measures are vital.

Site workers must learn to recognize and treat the various forms of heat stress.

The best approach is preventative heat stress management. In general:

- Workers should drink 16 ounces of water before beginning work, such as in the morning or after lunch. The water should be maintained at 50 to 60°F. Workers should drink 1 to 2-4-ounce cups of water every 30-60 minutes. A cool area for rest breaks should be designated, preferably air-conditioned. The use of alcohol during non-working hours and the intake of caffeine during working hours can lead to an increase in susceptibility to heat stress. Monitor for signs of heat stress.
- Workers should acclimate to site work conditions by slowly increasing workloads, i.e., do not begin site work activities with extremely demanding activities. This acclimation process may require up to two weeks for completion.
- Cooling devices should be used to aid natural body ventilation. These devices, however, add weight, and their use should be balanced against worker efficiency. An example of a cooling aid is long cotton underwear, which acts as a wick to help absorb moisture and protect the skin from direct contact with heat-absorbing protective clothing.

- Installed mobile showers and/or hose-down facilities should be used to reduce body temperature and cool protective clothing in serious heat stress situations.
- In hot weather, field activities should be conducted in the early morning or evening.
- Adequate shelter should be available to protect personnel from heat, as well as cold, rain, snow, etc., which can decrease physical efficiency and increase the probability of both heat and cold stress. Set up a command post in the shade or erect temporary shade at the workstation if practical.
- In hot weather, rotate shifts of workers with potential heat stress exposure.
- Good hygienic standards must be maintained by frequent changes of clothing and showering. Clothing should be permitted to dry during rest periods. Persons who develop skin problems should immediately consult medical personnel.

Effects of Heat Stress

If the body's physiological process fails to maintain a normal body temperature because of excessive heat, a number of physical reactions can occur ranging from mild (such as fatigue, irritability, anxiety, and decreased concentration, dexterity, or movement) to fatal.

Heat-related problems are:

HEAT STROKE: An acute and dangerous reaction to heat exposure caused by failure of heat regulating mechanisms of the body; the individual's temperature control system that causes sweating stops working correctly. Body temperature rises so high that brain damage and death will result if the person is not cooled quickly.

Symptoms: Red, hot, dry skin, although person may have been sweating earlier; nausea; dizziness; confusion; extremely high body temperature; rapid respiratory and pulse rate; unconsciousness or coma.

Treatment: Cool the victim quickly and obtain immediate medical assistance. If the body temperature is not brought down fast, permanent brain damage or death may result. Soak the victim in cool but not cold water, sponge the body with rubbing alcohol or cool water, or pour water on the body to reduce the temperature to a safe level (102oF). Observe the victim and obtain medical help. Do not give coffee, tea or alcoholic beverages.

HEAT EXHAUSTION: A state of definite weakness or exhaustion caused by the loss of fluids from the body. This condition is much less dangerous than heat stroke, but it nonetheless must be treated.

Symptoms: Pale, clammy, moist skin, profuse perspiration and extreme weakness. Body temperature is normal, pulse is weak and rapid, and breathing is shallow. The person may have a headache, may vomit, and may be dizzy.

Treatment: Remove the person to a cool place, loosen clothing, and place in a head-low position. Provide bed rest. Consult physician, especially in severe cases. The normal thirst mechanism is not

sensitive enough to ensure body fluid replacement. Have patient drink 1 to 2 cups water immediately and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1 to 2 gallons per day.

HEAT CRAMPS: Caused by perspiration that is not balanced by adequate fluid intake. Heat cramps are often the first sign of a condition that can lead to heat stroke.

Symptoms: Acute painful spasms of voluntary muscles (e.g., abdomen and extremities).

Treatment: Remove the victim to a cool area and loosen clothing. Have the patient drink 1 to 2 cups water immediately, and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1 to 2 gallons per day.

HEAT RASH: Caused by continuous exposure to heat and humid air and aggravated by chaffing clothes. Decreases ability to tolerate heat.

Symptoms: Mild red rash, especially in areas of the body in contact with protective gear.

Treatment: Decrease amount of time in protective gear, and provide powder to help absorb moisture and decrease chaffing.

Cold Stress

Persons working outdoors in low temperatures, especially at or below freezing are subject to cold stress. Exposure to extreme cold for a short time may cause severe injury to the surface of the body, or result in profound generalized cooling, causing death. Areas of the body that have high surface area-to-volume ratio, such as fingers, toes, and ears, are the most susceptible.

Two factors influence the development of a cold injury: ambient temperature and the speed of the wind. Wind chill is used to describe the chilling effect of moving air in combination with low temperature. For instance, 10° F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at -18°F.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. In addition, water conducts heat 240 times faster than air. Thus, when chemical-protective equipment is removed the body cools suddenly if the clothing underneath is perspiration soaked. Warm, dry clothing must be available and donned as soon as possible when these conditions are present.

Frostbite

Local injury resulting from cold is included in the generic term frostbite. There are several degrees of damage. Frostbite of the extremities can be categorized into:

Frost nip or incipient frostbite: sudden blanching or whitening of the skin.

Superficial frostbite: skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.

Deep frostbite: tissues are cold, pale, and solid; extremely serious injury.

To administer first aid for frostbite, bring the victim indoors and heat the areas quickly in water between 102 and 105-degrees F. (39 and 41 degrees C). Never place frostbitten tissue in hot water as the area will have a reduced heat awareness and such treatment could result in burns. Give a warm drink - not coffee, tea or alcohol. The victim should not smoke. Keep the frozen parts in warm water or covered with warm clothes for 30 minutes, even though the tissue will be very painful as it thaws. Then elevate the injured area and protect it from injury. Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas. Keep victim warm and get immediate medical care.

After thawing, the victim should try to move the injured areas slightly, but no more than can be done alone, without help.

Do not rub the frostbitten area, use ice, snow, gasoline or anything cold on frostbite, use heat lamps or hot water bottles to rewarm the frostbitten area, place the frostbitten area near a hot stove.

Hypothermia

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperature. Its symptoms are usually exhibited in five stages:

- shivering;
- apathy, listlessness, sleepiness, and sometimes rapid cooling of the body to less than 95°F.
- unconsciousness, glassy stare, slow pulse, and slow respiratory rate;
- freezing of the extremities;
- death.

The ultimate responsibility for postponing or delaying work at a site due to inclement weather rests with the Project Manager.

H&A employees and their subcontractors should be aware of potential health effects and/or physical hazards of working during inclement weather. Refer to OP1003-Cold Stress and OP1015-Heat Stress for discussion on weather hazards.

Poison Ivy

Grows everywhere in United States. In the East, Midwest, and the South, it grows as a vine. In the Northern and Western United States, it grows as a shrub. Each leaf has three leaflets. Leaves are green in the summer and red in the fall. In the late summer and fall, white berries may grow from the stems. The signs and symptoms of exposure include the following:

- Itching
- Redness
- Burning sensation
- Swelling
- Blisters

- Rash (may take up to 10 days to heal).

Potential mitigation for control includes the following:

- Wear long-sleeved shirts and long pants, tucked into boots. Wear cloth or leather gloves.
- Apply barrier creams to exposed skin.
- Educate workers on the identification of poison ivy, oak, and sumac plants.
- Educate workers on signs and symptoms of contact with poisonous ivy, oak, and sumac.
- Keep rubbing alcohol accessible. It removes the oily resin up to 30 minutes after exposure.

5. PROTECTIVE MEASURES

Personal Protective Equipment Requirements:

Copy and paste a checkmark “✓” into appropriate boxes.

Required PPE	Task 1	Task 2	Tasks 3	Task 4
	GW Monitoring/ Sampling	Excavation Oversight	Disposal Soil Sampling	CAMP monitoring
Hard hat	X	X	X	X
Safety glasses w/side shields	X	X	X	X
Steel-toe footwear	X	X	X	X
Hearing protection (plugs, muffs)		X	X	X
Tyvek™ coveralls		X	X	
PE-coated Tyvek™ coveralls				
Boots, chemical resistant				
Boot covers, disposable				
Leather work gloves				
Inner gloves – Non-Latex	X	X	X	
Outer gloves – Butyl rubber				
Tape all wrist/ankle interfaces				
Half-face respirator*				
Full-face respirator*				
Organic vapor cartridges				
Acid gas cartridges				
Other cartridges: <u>Enter type here</u>				
P-100 (HEPA) filters				
Face shield				
Personal Flotation Device (PFD)				
High-Visibility Safety Vest	X	X	X	X
Other:				
Level of protection required [C or D]:	D	D	D	D

* In the event of respirator use, H&A staff must be medically qualified, fit tested and clean shaven with no facial hair that will interfere with the seal.

The required PPE checked in any box above must be on site during the task being performed. Work shall not commence unless the required PPE is present.

Site Safety Equipment Requirements:

Check all items that are required to be on site.

Site Safety Equipment

☒ Fire Extinguisher	☒ First Aid Kit	☐ Flashlight
☐ Air horn/signaling device	☒ Cellular Phone	☐ Duct tape
☐ Ladder	☒ Barricade tape	☐ Drum dolly
☐ Two-way radio	☒ Safety cones	☐ Harness/Lanyard
☐ Other		

The required equipment checked in any box above must be on site during the task being performed. Work shall not commence unless the equipment is present.

6. MONITORING PLAN AND EQUIPMENT

Is air/exposure monitoring required at this work site for personal protection? ☒ Y ☐ N

Is perimeter monitoring required for community protection? ☒ Y ☐ N

Monitoring/Screening Equipment Requirements:

Check all items that are required to be on site.

Required Monitoring/Screening Equipment

☒ Photo-Ionization Detector (PID) 10.2eV	☐ Combustible Gas Indicator (CGI) (LEL)
☐ Photo-Ionization Detector (PID) 11.7eV	☐ Multiple Gas Detector LEL/O ₂ /H ₂ S/CO
☐ Photovac Micro Tip (PID) 10.6eV	☒ Dust Monitors (RAMs) required during excavation, soils transport activity
☐ Organic Vapor Monitor (FID)	☒ Colorimetric tubes Vinyl chloride
☐ Photovac Gas Chromatograph (GC)	☐ Other

The required equipment checked in any box above must be on site. Work shall not commence unless the equipment is present.

Standard Action Levels and Required Responses:

Exposure Guidelines for common contaminants are listed in Table 1 - Occupational Exposure Limits in the Chemical Hazards section above.

Requirements for PPE upgrades based on monitoring are in Table 2 - Monitoring Methods, Action Levels and Protective Measures following the Specific Monitoring Requirements section below.

Action levels for readings obtained with a multiple gas detector are listed below.

Instrument	Normal	Operating levels	Action levels – required responses
Oxygen Meter	20.9%	Between 19.5-23.5%	Below 19.5 %: leave area, requires supplied air Above 23.5%: leave area, fire hazard
CGI	0%	Less than 10%	Greater than 10%: fire/explosion hazard; cease work
Hydrogen Sulfide	0%	Less than 10 ppm.	Greater than 15 ppm (or 10 ppm for 8 hrs) requires supplied air respirator
Carbon Monoxide	0%	Less than 25 ppm	Greater than 200 ppm for 1 hour (or 25 ppm for 8 hrs) requires supplied air respirator

Standard Air Monitoring Plan (Volatiles):

- Prior to the beginning of work obtain background readings with the PID away from the site.
- Monitor the breathing zone when site soil is exposed (e.g., while drilling or excavating is occurring, etc.) with the PID.
- Monitoring should be conducted most frequently (e.g., every 15-30 minutes) when drilling or excavation first begins in a particular area and when soil is removed from the hole. After this, and if no exceedances of exposure limits are noted (see below), monitoring may be conducted less frequently (e.g., every 60 minutes).
- H&A general exposure limits will be used when a mixture of potentially volatile chemicals are suspected to be present in soil at the site.

In summary, if a reading of 5 ppm above background is detected with the PID for 5 minutes or longer, back away for a few minutes. Screen the air with dragger tubes to determine level of vinyl chloride. If VC is greater than 1 ppm sustained don respiratory protection. Screen the air again after any vapors/gases have been given a chance to dissipate. If 5 ppm above background is still noted, upgrade PPE and contact the LHSC and PM for further guidance.

- Record monitoring data and PPE upgrades in field book or on Record of Field Monitoring form and maintain with project files.
- Air monitoring for exposure should be based on the frequency established under the Standard Air Monitoring Plan or under the Specific Monitoring Requirements. Record time, location and results of monitoring and actions taken based upon the readings.

Specific Monitoring Requirements:

Monitoring requirements and frequency is indicated by task and location below.

Task Number:	<u>1, 2, 3</u>	Frequency	Continuous in the worker breathing zone	If total organic vapors exceed 10 ppm or are sustained at 5 ppm for 5 minutes in the breathing zone, conduct measurements with Vinyl chloride dragger tubes. If VC is greater than 1 ppm and/or VOCs continue to be sustained at 5 ppm upgrade protection to respirators.
Task Number	<u>2, 4</u>	Frequency	Continuous CAMP monitoring (Dust, PID) upwind and downwind	CAMP monitoring to be conducted continuously during any excavation or materials (soils) transport activity and dust control should be implemented when measured level exceeds action level.

TABLE 2
Last Revised September 2002

MONITORING METHOD, ACTION LEVELS AND PROTECTIVE MEASURES

INSTRUMENT	HAZARD	ACTION LEVEL	ACTION RESPONSE
Respirable Dust Monitor	Total Particulates	> 5 mg/m ³	Upgrade to Level C Protection
OVA, HNU ⁽²⁾ , Photovac Microtip	Total Organic Vapors	Background 10 ppm > background or lowest OSHA permissible exposure limit, whichever is lower, or as modified for this task. Sustained for >5 minutes in the breathing zone. 50 ppm over background, unless lower values required due to respirator protection factors	Level D Protection Upgrade to Level C - site evacuation may be necessary for specific compounds Cease work; upgrade to Level B ⁽³⁾ may be required
Explosimeter ⁽⁴⁾ (LEL)	Flammable/Explosive Atmosphere	<10% Scale Reading 10-15% Scale Reading >15% Scale Reading	Proceed with work Monitor with extreme caution Evacuate site
Oxygen Meter ⁽⁵⁾	Oxygen-Deficient Atmosphere	19.5% - 23.5% O ₂ < 19.5% O ₂ > 23.5% O ₂	Normal - Continue work Evacuate site; oxygen deficient Evacuate site; fire hazard
Radiation Meter ⁽⁶⁾	Ionizing Radiation	0.1 Millirem/Hour > 1 Millirem/Hour	If > 0.1, radiation sources may be present ⁽⁷⁾ Evacuate site; radiation hazard
Drager Tubes	Vapors/Gases	Species Dependent > 1 ppm vinyl chloride > 1 ppm benzene > 1 ppm 1,1-DCE	Consult Table 1 or other resources for concentration toxicity/detection data. Upgrade to Level C if concentration of compounds exceed thresholds shown at left; May need to cease work if other levels exceeded - site specific
Gas Chromatograph (GC)	Organic Vapors	3 ppm total OV > background or > lowest specific OSHA permissible exposure limit, whichever is lower	On-site monitoring or tedlar bag sample collection for off-site/laboratory analysis

Notes:

1. Monitor breathing zone.
2. Can also be used to monitor some inorganic species.
3. Positive pressure demand self contained breathing apparatus
4. Lower explosive limit (LEL) scale is 0-100%. LEL for most gasses is 15%.
5. Normal atmospheric oxygen concentration at sea level is 20%
6. Background gamma radiation is ~0.01-0.02 millirems/hour.
7. Contact H&A Health and Safety staff immediately.

Calibration and Use of Equipment:

Calibrate all monitoring equipment in accordance with manufacturers requirements, H&A calibration (OP) standards and site-specific requirements (e.g., at the beginning and end of each work day).

Calibration of equipment shall be documented in the field notes or Daily Field Report (DFR).

Documentation should include:

- Date/time
- Zero reading before calibration
- Concentration of calibration gas
- Reading obtained with calibration gas before adjusting span
- Final reading obtained with calibration gas after adjusting span

Respirable Aerosol Monitors for Particulate

A respirable aerosol monitor (RAM) allows field staff to assess whether airborne particulates have reached elevated levels. This portable real-time aerosol monitor measures mass concentrations of airborne dust, smoke, mists, haze and fumes, and also provides continuous real-time readouts. Auto-ranging digital display provides both real-time and time-averaged concentrations and large-capacity onboard data logging capability saves concentration data for future analysis.

Many instruments provide respirable, “PM-10” and “PM-1” correlated measurements with special nozzle attachments. For example, respirable particles or particulate matter smaller than 10 microns equivalent aerodynamic diameter (PM-10), a size-selective inlet is used to capture only those particles with a size of 10 microns or less. Most attachments like these will have to be rented or purchased separately.

Two smaller versions of the RAM are the MiniRAM® and the DataRAM ®(MIE, Inc.) that are also direct reading monitor for dust, aerosols, fumes and mists. For example, the PDM-3 (MIE, Inc.) is a real-time monitoring instrument capable of sensing and measuring aerosol concentrations over the range of 0.01 to 100 mg/m³. Used with the optional Cyclone, the MiniRAM will monitor respirable particulate.

The MiniRAM® aerosol monitor’s analog output is then connected to a data-logger designed specifically for this type of equipment. When the data collection is complete, the data logger will be downloaded into a personal computer for analysis and results. A database of exposure measurements will be constructed with a 1-sec interval between the concentration measurements. The DataRAM®, provides the same type of function with a built-in data-logger.

The database will be imported into a spreadsheet program, which will be used to plot the real-time information and to provide a graphic display of the relative dust concentrations during the worker's activities.

Respirator Use and Maintenance Overview

Staff Member exposures to airborne contaminants should always be reduced as much as possible through engineering controls, substitution and/or work practices. If exposure cannot be controlled

through the above methods, respiratory protection will be used to ensure Staff Members exposures are maintained below regulatory levels.

Medical Evaluations:

Before a Staff Member is issued a respirator, they will be enrolled in and approved through the medical monitoring program.

Fit-Testing Procedures:

All Staff Members that are issued a respirator will be fit tested annually. Staff Members with beards, long side burns or other forms of facial hair which make contact with the sealing surface of the respirator are not fit tested and cannot wear respirators. Staff Members who have significant weight change, major dental surgery or facial surgery are required to notify the appropriate health and safety personnel in their organization so they can be re-fitted.

Respirator Procedures:

Respirator inspection, maintenance, storage and use are the responsibility of the individual to whom the respirator was issued. Respirators should be inspected for cracks, tears or loss of integrity, shape and general condition, condition of exhalation and inhalation valves, and head adjustment straps, and cartridge installation.

Respirator Maintenance and Repair:

Respirators should be maintained according to manufacturer specifications and any worn or damaged parts should be replaced with appropriate replacement parts. Damaged respirators that cannot be repaired should be discarded.

Storage:

Respirators should be stored in their original shipping container or other container that protects the article from damage or contamination. The storage container should be labeled with the appropriate Staff Members name. Respirators should be cleaned with a mild soap and water solution, disinfectant and thoroughly inspected prior to storage.

Cartridge Selection and Change-out:

Only NIOSH approved cartridges will be used. The cartridges will be selected based upon the types of contaminants and expected exposure levels.

Because of variability in the field and environmental exposures including temperature, humidity and contaminant level, and the lack of useful indicators of effective coverage, the following change-out schedule will be used:

Organic Vapors	8 hours, project completion or odor
Acid Gas	8 hours, project completion or odor

Particulate Only	24 hours of use, increased breathing resistance or project completion

At the completion of all projects requiring respiratory protection, the cartridges will be discarded, the respirator will be disinfected and stored properly.

Training:

OSHA-required training as it relates to respiratory protection is provided during the 40-hour HAZWOPER and 8-hour HAZWOPER refresher courses. Additional training may be necessary for specific project demands to ensure Staff Members are aware of a specific site condition.

7. DECONTAMINATION AND DISPOSAL METHODS**Personal Hygiene Safeguards:**

The following minimum personal hygiene safeguards shall be adhered to:

- No smoking or tobacco products on any Hazwoper project.
- No eating or drinking in the exclusion zone.
- It is required that personnel present on site wash hands before eating, smoking, taking medication, chewing gum/tobacco, using the restroom, or applying cosmetics and before leaving the site for the day.
- It is recommended that personnel present on site shower or bathe at home at the end of each day of working on the site.

Standard Personal Decontamination Procedures:

Outer gloves and boots should be decontaminated periodically as necessary and at the end of the day. Brush off solids with a hard brush and clean with soap and water or other appropriate cleaner whenever possible. Remove inner gloves carefully by turning them inside out during removal. Wash hands and forearms frequently. It is good practice to wear work-designated clothing while on-site which can be removed as soon as possible. Non-disposable overalls and outer work clothing should be bagged onsite prior to laundering. If gross contamination is encountered on-site contact the Project Manager and LHSC to discuss proper decontamination procedures. The steps required for decontamination will depend upon the degree and type of contamination but will generally follow the sequence below.

1. Remove and wipe clean hard hat
2. Rinse boots and gloves of gross contamination
3. Scrub boots and gloves clean
4. Rinse boots and gloves
5. Remove outer boots
6. Remove outer gloves
7. Remove Tyvek coverall
8. Remove respirator, wipe clean and store
9. Remove inner gloves

Location of Decontamination Station:

TBD

Disposal of PPE:

PPE that is not grossly contaminated can be bagged and disposed in regular trash receptacles. PPE that is grossly contaminated must be bagged (sealed) and field personnel should communicate with the Project Manager to determine proper disposal.

Tools & Equipment Decontamination:

All decontamination should be conducted at the site and not at the office or lab.

Check all equipment and materials needed for decontamination of tools and other equipment.

☐ Acetone	☒ Distilled water	☒ Poly sheeting
☒ Alconox soap	☒ Drums for water	☒ Steam cleaner
☒ Brushes	☐ Hexane	☒ Tap water
☒ Disposal bags	☐ Methanol	☐ Washtubs
☒ 5 gallon pails	☒ Other Paper towels	

Standard Equipment Decontamination Procedures:

Air monitoring instrumentation and delicate instruments that are difficult to decontaminate or sensitive to water should be protected from contamination during use through the use of plastic sheeting. To the extent possible, efforts should be taken to limit the degree of contamination to hand tools and sampling equipment during use. Proper PPE must be worn while performing decontamination, including the wearing of chemical safety goggles and gloves. Storage or transport of decontamination solvents in squirt bottles is not permitted as they may discharge their contents upon ambient temperature change or leak if overturned. Standard equipment decontamination procedures are as follows. Any additional requirements are listed under Specific Equipment Decontamination Procedures below.

Pretreatment of heavily contaminated equipment may be conducted as necessary:

1. Remove gross contamination using a brush or wiping with a paper towel
2. Soak in a solution of Alconox and water (if possible)
3. Wipe off excess contamination with a paper towel
4. Clean with hexane or acetone and allow to dry

Standard decontamination procedure:

1. Wash using a solution of Alconox and water
2. Rinse with potable water
3. Rinse with methanol
4. Rinse with distilled water

Standard Disposal Methods for Contaminated Materials:

Excess sample solids, decontamination materials, rags, brushes, poly sheeting, etc. that are determined to be free of contamination through field screening can usually be disposed into client-approved, on-site trash receptacles. Uncontaminated wash water may be discarded onto the ground surface away from surface water bodies in areas where infiltration can occur. Contaminated materials must be segregated into liquids or solids and drummed separately for offsite disposal. Any additional requirements are listed under Specific Disposal Methods for Contaminated Materials below.

8. CONTINGENCY PLANNING

How H&A responds to an emergency depends on whether we are at an active facility or another other location. Many active facilities have very stringent requirements for the mitigation of emergencies. Therefore, the PM is responsible for identifying any specific requirements from the client contact.

As a rule of thumb, the following are H&A's basic responses to handling Emergencies. Typically, H&A does not mitigate emergencies. When Clients request or require specific functions such as First Aid/CPR trained personnel on site, we typically conform. Before any Project Manager or LHSC agrees to something more stringent, many issues should be considered such as training, safety, feasibility of an adequate response, insurance requirements, and much more.

Fire:

- Major Fires - Major fires will be mitigated by the local fire departments or by client's on-site fire/emergency response departments.
- Incipient Stage Fires -Incipient stage fires will be extinguished by on-site personnel using fire extinguishers. Only those who have received annual training may use an extinguisher.

Medical:

All H&A employee injuries and illnesses will be documented using the Supervisor's Accident / Injury / Near Miss Report (SAIR). This form is available on the Intranet.

- First Aid - First aid will be addressed using the on-site first aid kit. H&A employees are not required or expected to administer first aid/CPR to any H&A, Contractor, or Civilian personnel at any time and it is H&A's position that those who do are doing it on their behalf and not as a function of their job.
- Trauma - Based upon the nature of the injury, the injured party may be transported to the nearest hospital or emergency clinic by on-site personnel or by ambulance. First response to a trauma incident is to call 911 or facility security. H&A staff members are expected to assist in ancillary roles only such as directing ambulances to the scene. It is the discretion of the staff member on site whether an ambulance should be procured in remote locations where ambulance services will not be effective.

Hazardous Materials Spill:

- Small incidental spills (e.g. pint of motor oil) caused by H&A employees and/or by the contractor will be mitigated by the H&A staff member and/or the contractor.
- Large spills (e.g. large leak from heavy equipment fuel tank). The contractor is responsible for cleanup. In the event that it possesses a serious human or environmental threat, the local Fire Department and/or client emergency response department will be contacted. Once emergency has been mitigated typically clean up will be provided by a vendor.

Rescue:

H&A employees will not enter any confined spaces for rescue purposes.

Weather Related Emergencies:

H&A employees and their subcontractors should be aware of potential health effects and/or physical hazards of working during inclement weather. If applicable, safeguards against the effects and hazards of heat stress, cold stress, frostbite, thunderstorms, and lightning, etc., should be included with the section pertaining to physical hazards in this HASP.

Evacuation Alarms:

Evacuation alarms and/or emergency information will be communicated among personnel on site through verbal communication.

Emergency Services:

Emergency services will be summoned via on-site or cellular phone.

Emergency Evacuation Plan:

The site evacuation plan is as follows:

1. Establish a designated meeting area to conduct a head count in the event of an emergency evacuation.
2. If the work area is not near an emergency exit, exit via the closest route and meet at the designated meeting area.
3. Notify emergency response personnel (fire, police and ambulance) of the number of missing or unaccounted-for employees and their suspected location.
4. Administer first aid will in the meeting area as necessary.

Under no circumstances should any personnel re-enter the site area without the approval of the corporate H&S manager, the H&S coordinator, and the fire department official in charge.

Reporting Incidents

Detailed reporting procedures for work-related accidents and incidents involving H&A staff members consist of the following sequential steps:

1. **Initial notification** - The staff member who is injured or otherwise directly involved in a work-related incident is responsible for immediately notifying his/her supervisor (staff manager) of the event. Obviously, any other staff member present at the site may make the notification if the injury is serious and/or debilitating.
2. **Secondary notifications** - The staff manager shall notify his/her Local H&S Coordinator (LHSC) of the accident/incident as soon as possible after the initial response is completed. If a serious work-related injury occurs, the staff manager shall also directly notify the Corporate H&S Manager. The LHSC shall notify the Corporate H&S Manager in all minor cases. The Corporate H&S Manager will, in turn, be responsible for notifying senior H&A management, via email and/or phone, as necessary.

All work-related injuries, illnesses, and near misses shall be reported to the LHSC, regardless of severity. Thus, at a minimum, all first aid cases must be reported. It is not the responsibility of the staff manager or project manager to determine what shall be reported to the LHSC. The LHSC will work closely with the CHSM to determine reportability and recordability of an injury/illness on each case.

- 3. Accident report** - After the initial response (medical attention, etc.) is completed, the accountable staff manager is responsible for initiating an investigation into the cause of the accident/incident and for completing the H&A online accident/incident report form.
- 4.** The staff manager is responsible for completing the online submission by the close of business on the day following the event (24 hours).
- 5. Report distribution** – Copies of the report shall immediately be forwarded through the Online Incident Reporting system on HANK to the Corporate HR Representative This is the responsibility of the LHSC. In the event that the LHSC is not available, the staff manager will be delegated the responsibility.
- 6. Corrective actions** - The staff manager and LHSC (with input from the injured staff member and other staff members involved in the incident) are responsible for determining a course of action to ensure that the accident/incident does not occur again. Responses to serious work-related accidents or incidents may require the approval of the Corporate H&S Manager and senior management.

It is important that all H&A staff members understand these reporting procedures and the significance of the role of the staff member's staff manager in the process of responding to and reporting on-the-job injuries, illnesses and near misses.

Seeking Medical Attention:

The staff member should seek emergency medical services from an institution that is convenient for the services needed, such as a clinic, hospital, etc. If the injury is not an emergency, but medical treatment is required, refer the staff member to the listed Liberty Mutual Health Care Provider closest to the office – see emergency contact list at the beginning of this HASP.

9. HEALTH & SAFETY PLAN ACKNOWLEDGEMENT FORM

Note: Only H&A employees sign this page.

I hereby acknowledge receipt and briefing on this Health & Safety Plan prior to the start of on-site work and declare that I understand and agree to follow the provisions and procedures set forth herein while working on this site.

PRINTED NAME

SIGNATURE

DATE

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

10. PRE-JOB SAFETY CHECKLIST

The following checklist is designed to help Project Managers verify that all Health & Safety requirements are satisfied for projects involving site work and to aid in the preparation of the site-specific HASP.

Please initial and date the appropriate box once each requirement has been satisfied prior to commencement of site work.

#	Project H&S Requirements	Approval by PM or LHSC (initial each box or place NA)	Date Approved
1	Project site history has been researched and summarized, current site conditions have been determined and documentation of previous investigations, risk analyses and chemical data has been assembled and summarized.		
2	Project work scope has been outlined and potential chemical and physical hazards associated with work tasks have been identified.		
3	H&A personnel to be involved with the project have been identified and are current with medical surveillance, OSHA 40 hour and 8-hour refresher training. Hazwoper site supervisor requirements are satisfied.		
4	Additional training requirements have been met: e.g. nuclear density gauge, DOT, Confined Space Entry, Competent Person Training for Excavation, OSHA 10 hour certification, Railway Safety Training, etc.		
5	H&A personnel that may be required to wear a respirator are medically qualified and have current certification of fit testing.		
6	Client's additional H&S requirements have been met: e.g. facility safety orientations, safety documentation, meetings, special PPE requirements		
7	H&A subcontractors have met H&A's minimum requirements including: current OSHA 40 hour training, medical surveillance, written HASP, insurance, MSDSs.		
8	MSDSs are on site and available for chemicals on site.		
9	Safety equipment is available: e.g. flashlight, telephone, ladders, traffic cones, barricade tape, fire extinguisher, first aid kit, PPE, respiratory protection, air and dust monitoring instrumentation (calibrated), personal flotation device (PFD), 90' life line with ring, decontamination equipment, etc.		
10	HASP and supporting documentation is complete and signed by all members.		

**APPENDIX A
HASP Amendment Form**

This Appendix is to be used whenever there is an immediate change in the project scope that would require an amendment to the HASP. For project scope changes associated with “add-on” tasks, the changes must be made in the body of the HASP. Before changes can be made, a review of the potential hazards must be initiated by the H&A Project Manager.

Amendment No.	
Site Name:	
Work Assignment No.:	
Date:	
Type of Amendment:	
Reason for Amendment:	
Alternate Safeguard Procedures:	
Required Changes in PPE:	

Project Manager Signature: _____ Date: _____

Local Health and Safety Coordinator: _____ Date: _____

This original form must remain on site with the original HASP. If additional HASPs are in the field, it is the Project Manager’s responsibility to forward a signed copy of this amendment to those who have copies.

**APPENDIX B
Issuance and Compliance
Site Safety Officer Role and Responsibilities
Training Requirements**

This Health & Safety Plan (HASP) has been prepared in accordance with the requirements of Title 29 the Code of Federal Regulations (CFR) Section 1910.120/1926.65 to provide guidance for the protection of onsite personnel from physical harm and chemical exposure while working at the subject site.

The specific requirements of this HASP include precautions for hazards that exist during this project and may be revised as new information is received or as site conditions change.

- This HASP must be signed by all Haley & Aldrich (H&A) staff members who will work on the project, including H&A visitors. By signing the Health and Safety Plan Acknowledgement Form personnel are acknowledging that they are aware of the specific hazards of the site and agree to follow the provisions and procedures required to safeguard themselves and others from those hazards.
- This HASP or a current signed copy must be retained at the site at all times when H&A staff members are present.
- Deviations from this HASP are not permitted without prior approval from the above signed. Unauthorized deviations may constitute a violation of H&A company procedures/policies and may result in disciplinary action.
- Revisions to this HASP must be outlined within the contents of the HASP. If immediate or minor changes are necessary, the LHSC and H&A Project Manager may use Appendix A (HASP Amendment Form), located in the back of this HASP. Any revision to the HASP requires personnel to be informed of the changes and that they understand the requirements of the change.
- This HASP is not for H&A Subcontractor use. Each subcontractor engaged is responsible for all matters relating to the health and safety of their personnel and the safe operation of their equipment. This HASP will be made available as a reference so that subcontractors are informed of the potential hazards associated with the site to the extent we are aware. Subcontractors must develop their own HASP which must be, at a minimum, at least as protective as this HASP.
- This Site Specific HASP provides only site-specific descriptions and work procedures. General safety and health compliance programs in support of this HASP (e.g., injury reporting, medical surveillance, personal protective equipment (PPE) selection, etc. are described in detail in the H&A Corporate Health and Safety Program Manual and within Standard Operating Procedures (OPs). Both the manual and OPs can be located on the Company Intranet. When appropriate, users of this HASP should always refer to these resources and incorporate to the extent possible. The manual and OPs are available to clients and regulators per request.

Site Safety Officer:

The site safety officer (SSO) is defined as the individual responsible to the employer with the authority and knowledge necessary to implement the HASP and verify compliance with applicable health and safety requirements.

The H&A Project Manager may designate any person as the site safety officer (SSO) and determines the order of authority on site. Usually the highest ranking person on site is the SSO. A site safety officer must be on site at all times. When none of the designated SSOs are present on site, the senior person for H&A on site will default to the SSO. This project has identified the following hierarchy for SSO.

1. Jim Siegfried or designate
2. Ed Hynes

Site Safety Officer Roles and Responsibilities:

The SSO is responsible for field implementation of this HASP and enforcement of safety rules and regulations. SSO functions include:

- Act as H&A's liaison for health and safety issues with client, staff, subcontractors, and agencies.
- Verify that utility clearance has been performed by H&A subcontractors.
- Oversee day-to-day implementation of the HASP by H&A employees on site.
- Interact with subcontractor project personnel on health and safety matters.
- Verify use of required PPE as outlined in the HASP.
- Inspect and maintain H&A safety equipment, including calibration of air monitoring instrumentation used by H&A.
- Perform changes to HASP and document in Appendix A of the HASP as needed and notify appropriate persons of changes.
- Investigate and report on-site accidents and incidents involving H&A and its subcontractors.
- Verify that site personnel are familiar with site safety requirements (e.g., the hospital route and emergency contact numbers).
- Report accidents, injuries, and near misses to the H&A PM and Local Health and Safety Coordinator (LHSC) as needed.

The SSO will conduct initial site safety orientations with site personnel (including subcontractors) and conduct toolbox and safety meetings thereafter with H&A employees and H&A subcontractors at regular intervals and in accordance with H&A policy and contractual obligations. The SSO will track the attendance of site personnel at H&A orientations, toolbox talks, and safety meetings. Subcontractors will document training and provide training rosters to the H&A SSO.

The SSO will report accidents such as injury, overexposure, or property damage to the Local Health and Safety Coordinator, to the Project Manager, and to the safety managers of other on-site consultants and contractors. The SSO will consult with the safety managers of other on-site consultants and subcontractors on specific health and safety issues arising over the course of the project, as needed.

Health and Safety Training Requirements:

Personnel will not be permitted to supervise or participate in field activities until they have been trained to a level required by their job function and responsibility. H&A staff members, contractors, subcontractors, and consultants who have the potential to be exposed to contaminated materials or physical hazards must complete the training described in the following sections.

The H&A Project Manager/LHSC will be responsible for maintaining and providing to the client/site manager documentation of H&A staff members' compliance with required training as requested. Records shall be maintained per OSHA requirements.

40-Hour Health and Safety Training

The 40-Hour Health and Safety Training course provides instruction on the nature of hazardous waste work, protective measures, proper use of personal protective equipment, recognition of signs and symptoms which might indicate exposure to hazardous substances, and decontamination procedures. It is required for all personnel working on-site, such as equipment operators, general laborers, and supervisors, who may be potentially exposed to hazardous substances, health hazards, or safety hazards consistent with 29 CFR 1910.120.

8-hour Annual Refresher Training

Personnel who complete the 40-hour health and safety training are subsequently required to attend an annual 8-hour refresher course to remain current in their training. When required, site personnel must be able to show proof of completion (i.e., certification) at an 8-hr refresher training course within the past 12 months.

8-Hour Supervisor Training

On-site managers and supervisors directly responsible for, or who supervise staff members engaged in hazardous waste operations, should have eight additional hours of Supervisor training in accordance with 29 CFR 1910.120. Supervisor Training includes, but is not limited to, accident reporting/investigation, regulatory compliance, work practice observations, auditing, and emergency response procedures.

Additional Training for Specific Projects

H&A personnel will ensure their personnel have received additional training on specific instrumentation, equipment, confined space entry, construction hazards, etc., as necessary to perform their duties. This specialized training will be provided to personnel before engaging in the specific work activities including:

- Client specific training or orientation
- Competent person excavations
- Confined space entry (entrant, supervisor, and attendant)
- Heavy equipment including aerial lifts and forklifts
- First aid/ CPR
- Diving certification
- Use of fall protection
- Commercial drivers license
- Use of nuclear density gauges
- Asbestos awareness

APPENDIX J

Responsibilities of Owner and Remedial Party

Responsibilities

The responsibilities for implementing the Site Management Plan (“SMP”) for the Former AB Dick Facility Site (the “Site”), number #C828148, are divided between the Site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:
811 Jefferson Road, LLC

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:
811 Jefferson Road, LLC

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 a(n) 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 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) 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) 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.
- 8) 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 K

Remedial System Optimization Report Outline

REMEDIAL SYSTEM OPTIMIZATION FOR Former AB Dick Facility Site

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