AECOM Environment

Prepared for:
Scott Technologies, Inc.
aka Scott Figgie LLC
Frankford, DE

Prepared by:
AECOM
Buffalo, NY
60536398
June 2017

Periodic Review Report (December 29, 2015 through April 12, 2017)

Former Scott Aviation Facility (Area 1)
Lancaster, New York
NYSDEC Site Code No. C915233

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Dino L. Zack, P.G.

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Prepared By [Name]

James Kaczor, P.G.

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Reviewed By [Name]

Certification

I hereby certify, as a Professional Engineer licensed in the State of New York, that this "Periodic Review Report (December 29, 2015 through April 12, 2017)," prepared by AECOM Technical Services, Inc. for Scott Figgie LLC, was completed in conformance with accepted standards of practice for a project of this scope and nature, as well as the requirements of State of New York, Department of Environmental Conservation (NYSDEC), Decision Document dated December 2015 for the former Scott Aviation property (formerly Figgie International), NYSDEC Site Code No. C915233.

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PE Stamp

Signature: _____

Mark E. Lang, P.E., BCEE
New York License No. 074013
AECOM Technical Services, Inc.

Date: 6/23/17

Contents

List of Appendices

List of Tables

List of Figures

List of Acronyms

1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
1,2-DCA	1,2-dichloroethane
1,1,1-TCA	1,1,1-trichloroethane
1,1,2-TCA	1,1,2-trichloroethane
AAR	Alternatives Analysis Report
ABC®	Anaerobic Biochem
ABC+®	Anaerobic Biochem with ZVI
AECOM	AECOM Technical Services, Inc.
AMSL	above mean sea level
AVOX	AVOX Systems Inc
BCP	Brownfield Cleanup Program
bgs	below ground surface
CCR	Construction Completion Report
cis-1,2 DCE	cis-1,2-dichloroethene
cm/sec	centimeters per second
COC	contaminants of concern
COPC	constituents of potential concern
CVOC	chlorinated volatile organic compound
DHC	*Dehalococcoides*
ERD	Enhanced Reductive Dechlorination
ESA	Environmental Site Assessment
ft	feet
HPT	hydraulic profiling tool
IC/EC	Institutional Controls/Engineering Controls
IRM	interim remedial measure
K	hydraulic conductively
METI	Matrix Environmental Technologies, Inc.
MIP	membrane interface probe
MNA	monitored natural attenuation
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation

NYSDOH	New York State Department of Health
O&M	operation and maintenance
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PGA	Preliminary Groundwater Assessment
PID	photoionization detector
PRR	Periodic Review Report
QA/QC	quality assurance / quality control
RAO	remedial action objective
RAWP	Remedial Action Work Plan
RI	remedial investigation
SCO	soil cleanup objectives
SMP	Site Management Plan
SRI	Supplemental Remedial Investigation
SVI	soil vapor intrusion
SVOC	semi volatile organic compound
TCE	trichloroethene
TOC	total organic carbon
TOGS	Technical and Operational Guidance Series
TVOC	semi volatile organic compound
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VC	vinyl chloride
VOC	volatile organic compound
XSD	halogen specific detector
ZVI	zero valence iron

Executive Summary

On September 1, 2004, the former Scott Aviation Facility (the "Site") was sold by Scott Technologies, Inc. to the current facility owner/operator, AVOX Systems Inc. On September 11, 2008, Scott Technologies, Inc. submitted an application for the Site to enter the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP), per Title 6 New York Codes, Rules, and Regulations Part 375-3.4 (Applications), effective December 14, 2006. Scott Technologies, Inc. applied for entry into NYSDEC BCP as a participant to investigate and remediate, as appropriate, potential areas of environmental concern associated with the Site. On July 8, 2009, NYSDEC approved the application and Scott Technologies was accepted into the BCP program as a participant. Scott Technologies, a successor to Figgie International, is now known as Scott Figgie LLC.

Soil, groundwater, surface water, and soil vapor impacts at the Site were outlined in reports submitted to the NYSDEC that describe the results of a series of investigations which took place over several years. Impacts identified during these investigations were addressed via interim remedial measures (IRMs) prior to the issuance of a final Decision Document and Certificate of Completion for the Site.

Based on the implementation of the IRMs, findings of the investigation of the Site indicate that the Site no longer poses a threat to human health or the environment; therefore No Further Action is the selected remedy. The No Further Action remedy includes quarterly groundwater monitoring and quarterly inspections of the boiler room repairs to the floor cracks and joints, and sealing of the annulus around each floor drain to mitigate the potential for subslab vapors to enter the building.

Quarterly post-IRM groundwater monitoring shows a notable decrease in the concentrations of contaminants of concern (COC), and no off-Site migration of COCs in groundwater. Additionally, microbial analysis of shallow and deep overburden groundwater indicates that the necessary microflora, such as *Dehalococcoides* (DHC) species producing the enzymes tceA reductase and vinyl chloride reductase, are present in the subsurface.

A continuation of quarterly groundwater monitoring for volatile organic compounds, quarterly inspections of the boiler room floor, and annual reporting per the NYSDEC-approved Site Management Plan is recommended for the next reporting period (April 2017 through April 2018). In addition, monitoring wells and temporary piezometers not included in the groundwater monitoring program are proposed to be decommissioned, and wells in need of repairs are proposed to be rehabilitated.

1.0 Introduction

On behalf of Scott Figgie LLC (successor to Scott Technologies, Inc.), and pursuant to the requirements of New York State Department of Environmental Conservation (NYSDEC), Decision Document (NYSDEC, December 2015) and Site Management Plan (AECOM, December 2015), AECOM Technical Services, Inc. (AECOM) prepared this Periodic Review Report (PRR) to summarize the groundwater monitoring activities for the former Scott Aviation facility (the "Site", also known as Area 1), NYSDEC Site Code No. 915233, located at 225 Erie Street, Village of Lancaster, County of Erie, State of New York (**Figure 1**). The reporting period discussed herein encompasses the period between December 29, 2015 (date the NYSDEC issued a Certificate of Completion for construction) and April 12, 2017. The Site is currently owned and operated by AVOX Systems, Inc. (AVOX).

1.1 Report Organization

The purposes of this PRR are to provide a summary of the controls implemented for the Site as required by Section 7.2 of the Site Management Plan (SMP) (AECOM, December 2015) and to provide recommendations for future controls at the Site.

This PRR was developed to adhere to NYSDEC site investigation and remediation requirements (NYSDEC DER-10, May 2010). More specifically, this report provides the following information:

- An Executive Summary including a brief summary of the Site, nature and extent of contamination, remedial history, the effectiveness of the remedial program, and recommendations for changes to the SMP;
- Brief summary of the Site and PRR organizational details (Section 1.0);
- A Site overview, describing the Site location, significant features, surrounding areas, and the extent of environmental impacts prior to the Site remediation. A description of the chronology of the main features of the remedial program for the Site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection (Section 2.0);
- A groundwater monitoring program summary including a description of the requirements of the monitoring, a summary of the groundwater monitoring activities completed during the PRR reporting period, a comparison of the most recent (April 2017) groundwater results to the Remedial Action Objectives (RAOs) of the Site, and conclusions regarding the monitoring completed and the resulting evaluations regarding remedial performance, effectiveness, and protectiveness (Section 3.0);
- A description of the operations and maintenance (O&M) tasks completed and recommendations for improvements (Section 4.0);
- A review of the Institutional Controls/Engineering Controls (IC/EC) for the Site (Section 5.0);
- A summary of overall conclusions and recommendations regarding compliance with the SMP, performance and effectiveness of the remedy, a description of upcoming Site-related activities, and a proposed monitoring and compliance sampling and reporting schedule (Section 6.0); and

- References used in the preparation of this report (Section 7.0).

2.0 Site Overview

The following subsections present a description the Site location, significant features, surrounding areas, and the extent of contamination prior to the Site remediation. A description of the chronology of the main features of the remedial program for the Site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection is also presented.

2.1 Site Location

The Site is located in Lancaster, Erie County, New York and is identified as Section 104 Block 5 and Lots 8 and 9 on the Erie County Tax Map; refer to **Figure 1** – Site Location Map. The Site is approximately 1.4 acres in area and is bounded by Erie Street to the north, railroad tracks to the south, residential zoned property (vacant lot) to the east, and residential zoned property (with house) to the west; refer to **Figure 2** – Site Layout Map).

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: outbuildings that support Plant 1 (which is not part of the Site), asphalt driveways and parking areas, and lawn and brush-covered areas. Site occupants include maintenance and shipping/receiving personal, as manufacturing activities have been moved to plants located on the north side of Erie Street.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include both commercial and residential properties. The properties immediately south of the Site include railroad tracks; the properties immediately north of the Site include commercial properties; the properties immediately east of the Site include AVOX Plant 1 and its parking lot, and then residential properties (including vacant land); and the properties to the west of the Site include residential properties.

2.2.2 Site Geology/Hydrogeology

The native soils underlying the Site generally consist of interbedded silts and clays, with discontinuous sporadic fine sand lenses (shallow overburden). A thin coarse-grained layer of weathered shale is located above the bedrock (deep overburden). Overburden thickness ranges from 20 feet (ft) in the southern portion of the Site to 26 ft in the northern portion of the Site.

The average depth to bedrock is approximately 21 ft. Bedrock was observed to consist of black shale of the Marcellus Formation (Hamilton Group).

A transect for a geologic cross section with monitoring well and piezometer locations is shown on **Figure 3**, and the geologic cross-section is shown on **Figure 4**.

Groundwater monitoring wells are installed at three intervals: shallow overburden, deep overburden, and bedrock. Overburden groundwater is first encountered at the Site in the shallow overburden, and then again just above the bedrock. An observation of the groundwater within the deep overburden, which is present on top of bedrock, indicates a semi-confined state.

Results of the in-situ hydraulic conductivity (K) tests performed in the monitoring wells at the Site showed that K values range from 1.49E-03 centimeters per second (cm/sec) to 3.13E-05 cm/sec in the shallow overburden, and range from 4.72E-03 cm/sec to 8.96E-05 cm/sec in the deep overburden. Hydraulic conductivity testing was not performed in the bedrock monitoring well.

The natural flow of groundwater at the Site in both the shallow and deep overburden is to the northwest. The flow direction is most pronounced in the deep overburden, as the shallow overburden groundwater is influenced by seasonal standing water to the southwest, a storm sewer network cutting through the Site, large asphalt areas to the north and east, and Plant 1 to the east. Depth to groundwater across the Site in both the shallow and deep overburden was measured in April 2017 and is discussed in detail in Section 5.0 of this report.

2.2.3 Site 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 7.0.

The general historical operations that existed in the Plant 1 building adjacent to the Site were primarily manufacturing, development, testing, and distribution for aircraft and military supplied-air systems. The oldest portion of Plant 1 dates to the early 1950s. That original building was expanded several times, with most of it in place by 1975 except for a small warehouse addition in 1996. Plant 1 historical activities included the chemical cleaning and repainting of oxygen cylinders, the chemical cleaning (with inorganic acid solutions) and chromium coating (in a non-electrolytic “soak bath”) of metallic components of oxygen supply systems, and the fabrication of oxygen-regulating assemblies. Plant 1 also supported a Class 10,000 clean room and a Class 100,000 clean room. The office area contained management, administrative, engineering, training, and other support activities, and a cafeteria.

As of 2010, Plant 1 has no longer been used for production (i.e., painting and plating activities have terminated). The BCP boundary for the Site is located immediately west/southwest of Plant 1. In general, the pre-remediated areas as described below consisted of low-level metals in the top of the shallow overburden soil immediately south of Plant 1, volatile organic chemicals (VOCs) in shallow overburden soil at the fence gate southwest of Plant 2, and VOCs in shallow and deep overburden groundwater west/southwest of Plant 1. Note: the BCP boundary, or VOC-impacted groundwater plume, does not extend off the AVOX property.

2.2.3.1 Phase I

In 2004, a Phase I Environmental Site Assessment (ESA) was performed at the Site by Earth Tech, Inc. (now AECOM) on behalf of the then owner, Scott Technologies, Inc. The entire facility was sold to the current owner, AVOX, in September 2004. Historical aerial photographs included in the Phase I ESA Report indicated an area of potentially disturbed soil on the west side of Plant 1, south of the existing visitor parking area, and just outside the Plant 1 western perimeter fence line on the adjacent vacant parcel (Earth Tech, April 2004). The Phase I ESA also identified two former underground storage tanks (USTs) that had contained gasoline starting in the early 1970s which were removed from the southeastern portion of the Plant 1 Area in November of 1987; however, no records were found to indicate that any post-excavation sampling was done to demonstrate that the soil and groundwater in the vicinity had not been impacted.

Another former UST that had contained gasoline from an unknown date until the early 1970s was reportedly cleaned and closed in place at that time by filling it with sand. It is believed to be located beneath the current hazardous materials storage shed. No records were found to indicate exactly where that tank is located, when closure occurred, or that any post-closure sampling was done to demonstrate that soil and ground water in the vicinity had not been impacted. From the early 1950s to about 1973, used sand from a steel-casting foundry operation, located in the western portion of Plant 1, was disposed behind (south of) Plant 1.

2.2.3.2 Phase II

A Phase II Environmental Site Investigation was completed in 2004 for the entire Scott Aviation facility, to address environmental concerns described in the Phase I ESA Report, including the area of potentially disturbed soil on the west side of Plant I. During the Phase II ESI, seven test pits were excavated. Residual paint sludge of unknown origin was observed in two of the test pits. The paint sludge area was approximately 150 square ft in size, and located just west and south of the vehicle gate located in the western perimeter fence, immediately north of the water tower. Elevated levels of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) present in the soil immediately below the waste indicated that some leaching of the waste had occurred (Earth Tech, June 2004).

2.2.3.3 Interim Remedial Measure - Soil Excavation

On June 28, 2005, Earth Tech, in accordance with an Interim Remedial Measures (IRM) / Supplemental Site Investigation Work Plan, performed an initial excavation of the buried paint sludge material located to the west of Plant 1. A total of 60 cubic yards of soil was excavated to the west of Plant 1, down to the level at which groundwater was encountered - about 6 ft below ground surface (bgs). Further excavation was not completed during the IRM, as the scope of work only addressed vadose zone soil.

2.2.3.4 Preliminary Groundwater Assessment

The above investigations identified the general areas of concern. As a result of the elevated VOC and SVOC soil concentrations detected in the excavation bottom at Area 1 during the 2005 IRM, a Preliminary Groundwater Assessment (PGA) was performed in 2006 and 2007. The purpose of the PGA was to assess the nature and extent of VOCs in groundwater in the vicinity of Area 1. A series of groundwater wells was installed, and samples were collected and analyzed as a part of the PGA (Earth Tech, January 2008). Eighteen temporary piezometers were installed during the PGA to monitor shallow overburden groundwater. Groundwater samples collected from these piezometers contained VOCs, with 18 of these compounds detected at concentrations that exceeded the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 protection of drinking water standards. Samples of deep overburden groundwater also contained VOCs, but to a lesser degree than the shallow overburden groundwater.

2.2.3.5 Remedial Investigation

The BCP Remedial Investigation (RI) began in December 2010 with the completion of soil borings, the installation of monitoring wells, and the collection of soil, groundwater and vapor samples for chemical analysis. This initial work was completed during the summer of 2010. A Supplemental RI (SRI), completed in June 2011, included the installation of additional monitoring wells, groundwater sampling, and an evaluation of a storm sewer system that was located throughout the BCP site. The RI and SRI were performed to gather the data necessary to complete the characterization of chemical presence in on-site groundwater, soil, and soil vapor, in order to identify and evaluate

necessary and appropriate remedial alternatives. The proposed remedial alternatives were presented in an Alternatives Analysis Report (AAR) (AECOM, September 2015). That AAR was completed in accordance with the NYSDEC DER Draft BCP Guide (NYSDEC, May 2004), 6 NYCRR Part 375 Environmental Remediation Programs (NYSDEC, December 14, 2006), and NYSDEC DER-10 (NYSDEC, May 3, 2010).

These studies investigated Area 1 for contamination in surface soil, subsurface soil, groundwater, and impacts to on-site sewers. Constituents of potential concern (COPCs) were identified for soil by comparison of maximum detected concentrations for VOCs to 6 NYCRR Part 375 Unrestricted Use soil cleanup objectives (SCOs), and for semi VOCs (SVOCs), metals, pesticides, and polychlorinated biphenyls (PCBs) by comparison to 6 NYCRR Part 375 Commercial Use SCOs. COPCs were identified for groundwater by comparison of maximum detected concentrations for VOCs, SVOCs, metals, pesticides, and PCBs to NYSDEC TOGS 1.1.1 protection of drinking water standards. The results of this comparison to applicable standards are detailed below.

- Surface Soil - VOC concentrations for surface soil (i.e., 0 to 2 inches bgs) were below the NYSDEC Subpart 375-6 SCOs for Unrestricted Use at the borings sampled. SVOC, metal, PCB, and pesticide concentrations were below the SCOs for Commercial Use, with the exceptions of benzo(a)pyrene (potentially resulting from the adjacent active rail line) and metals cadmium and nickel.

- Subsurface Soil - VOC concentrations from subsurface soil samples collected from borings during the RI and SRI were below the SCO for Unrestricted Use, with the exception of acetone and methylene chloride (common laboratory contaminants) at two borings: DPT8-2A and DPT8-2B, both located south of Plant 1. VOC concentrations from one confirmation sample collected from the bottom of the historic IRM (B-1A) exhibited seven compounds exceeding Unrestricted Use SCOs (all seven compounds were below Commercial Use SCOs). SVOC, pesticide and PCB concentrations from subsurface soil samples were all below Unrestricted Use SCOs. Regarding metals, only mercury, copper, and cadmium exceeded SCOs for Commercial Use. These exceedances occurred at two borings: DPT8-1A and DPT8-2A.

- Groundwater - Analytical data for groundwater samples collected from the shallow and deep overburden wells during the RI and SRI identified the presence of VOCs exceeding NYSDEC TOGS 1.1.1 standards for the protection of drinking water (NYSDEC, June 1998, April 2000 addendum). Refer to **Figure 5** and **Figure 6** for the RI/SRI total VOC (TVOC) contaminant plumes for shallow and deep overburden plumes respectively. There were no exceedances of NYSDEC TOGS 1.1.1 protection of drinking water standards in the bedrock groundwater. The most frequently detected VOCs were trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE). Refer to **Figure 7** and **Figure 8** for the RI/SRI TCE contaminant plumes for shallow and deep overburden plumes respectively. The greatest VOC concentrations were detected in the area of the previously-excavated source area during the 2005 IRM. At perimeter wells, VOCs were either not detected or were detected at concentrations below or slightly above NYSDEC TOGS 1.1.1 protection of drinking water standards for TCE. See **Appendix A** for a summary of groundwater VOC data collected during the RI and SRI, and **Appendix B** for trend plots illustrating concentrations of contaminants of concerns (COCs) which include 1,1,1-trichloroethane (1,1,1-TCA), 1,1,2-trichloroethane (1,1,2-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), 1,2,dichlroethane (1,2-DCA), tetrachloroethene (PCE), TCE, and vinyl chloride (VC) over time. SVOCs in groundwater were below NYSDEC TOGS 1.1.1 protection of drinking

water standards. Three naturally occurring metals (iron, magnesium, and sodium) were detected in groundwater above NYSDEC TOGS 1.1.1 protection of drinking water standards. No PCBs were detected, and only one pesticide was tentatively detected in one groundwater sample at a concentration greater than NYSDEC TOGS 1.1.1 protection of drinking water standards. Refer to the Alternatives Analysis Report (AAR) (AECOM, April 2015) for groundwater VOC, SVOC, metal, and PCB/pesticide data.

- Storm Sewer Catch Basins - A storm sewer with several catch basins is present in Area 1; refer to **Figure 3** for the location of the storm sewer system. VOCs were detected within storm sewer catch basins located on the Site and from water within the storm sewer pipe bedding. Groundwater is present above the storm sewer piping; refer to the AAR (AECOM, April 2015) for storm sewer VOC data and for temporary piezometer water sample data that was collected from within the sewer pipe bedding gravel.

- Soil Vapor - Based on the evaluation of the data against the decision matrices, a vapor intrusion condition is not present at the Site, and indoor air quality has not been adversely impacted by the presence of the adjacent groundwater plume. However, per a June 1, 2012 letter from the NYSDEC to Scott, the New York State Department of Health (NYSDOH) considered this Site to be a significant threat due to elevated concentrations of VOCs in sub-slab soil vapor, and the potential for this vapor to impact indoor air. Refer to the AAR (AECOM, September 2015) for air sampling data, for vapor data compared to 2006 NYSDOH guidance values, and for the United States Environmental Protection Agency (USEPA) 2001 Building Assessment and Survey Evaluation database indoor air values, respectively.

2.2.3.6 Soil Vapor Intrusion Evaluation

Based on NYSDEC comments on the draft AAR (AECOM, April 2013), AECOM completed a targeted soil vapor intrusion (SVI) investigation for the Site in July 2013. The purpose of that SVI investigation was to assess whether soil vapor on the Site in the vicinity of a nearby residence at 205 Erie Street contained chlorinated VOCs (CVOCs) at concentrations sufficiently elevated to represent a potential indoor air quality issue for the nearby buildings (AECOM, August 2013). A second investigation and report was completed in September 2013 to follow up on one TCE detection in soil vapor above the method detection limit. Both groundwater and soil samples were collected hydraulically downgradient of Area 1, between the facility and 205 Erie Street, and focused on seven CVOCs that should be considered as part of an SVI analysis for the residence per NYSDOH guidance values: 1,1,1-TCA; cis-1,2-DCE; VC; 1,1-DCE; carbon tetrachloride, PCE, and TCE.

No CVOC listed above was reported in any of the soil or groundwater samples. Acetone was reported in one soil sample (12 micrograms per kilogram). Acetone was also reported in five of the six groundwater samples and in the trip blank. The only other VOC reported was 2-butanone at 4.1 micrograms per liter (µg/L). AECOM reviewed historical soil, groundwater, soil vapor, and stormwater data from the northern portion of the Area 1 Site to assess the potential relationship between the low level TCE concentration reported in SV-1 in July 2013 and the Area 1 contamination. The collective data does not identify a clear relationship between the two that would warrant further SVI sampling at the residential property. Multiple media have been evaluated. The property boundary between AVOX (which includes the Site) and 205 Erie Street appears to not be impacted by the BCP Site (AECOM, October 2013).

2.2.3.7 Interim Remedial Measures - 2014

During a conference call between NYSDEC, Scott, AECOM, and AVOX on February 28, 2014, the NYSDEC recommended moving forward with the BCP cleanup in advance of an approved Final AAR by completing four IRMs to address soil and selected groundwater impacts at the Site. They included:

- Excavation and off-site disposal of shallow soils impacted by metals (cadmium, copper and nickel);
- Excavation and off-site disposal of subsurface soils impacted by VOCs in some locations;
- Grout sealing onsite storm sewer joints to prevent groundwater infiltration, and installation of impermeable plugs across the pipe bedding to prevent migration of groundwater; and,
- Mitigation of SVI concerns at the AVOX boiler room (the only structure within Area 1 that is occasionally occupied).

Those four IRMs were described in an IRM Remedial Action Work Plan (RAWP) dated June 4, 2014. On August 14, 2014, NYSDEC provided approval to begin the described work per the 2014 IRM RAWP.

Soil Excavation and Storm Sewer Interim Remedial Measures

The 2014 IRM activities were initiated on September 8, 2014. The soil excavation and storm sewer IRMs were completed during October 2014. Metals impacted soil was excavated to 1 ft bgs in the vicinity of MW-41B, with all confirmatory samples passing metal Commercial Use SCOs for the target parameters. Confirmation soil samples were collected from the excavation sidewalls and bottoms. Soil was excavated to 2 ft bgs in the vicinity of DPT8-1 and DPT8-2. Following the initial excavation, an additional 2 ft wide by 2 ft deep excavation occurred on the south side wall of DPT8-1 and on the north side wall of DPT8-2, until sample results were below Commercial Use SCOs. Following receipt of passing sample confirmation data, and with concurrence from the NYSDEC, the excavated areas were backfilled with imported soil that met NYSDEC Unrestricted Use SCOs, and restored to pre-excavation conditions. Each excavation remained open until receipt of soil analytical results determined that confirmation soil samples were below respective SCOs, and the NYSDEC issued approval to discontinue excavation.

VOC concentrations from soil confirmation samples collected in 2005 following an IRM soil excavation were found to be in exceedance of the Unrestricted Use SCO. These samples were collected at or below typical shallow overburden groundwater depths. The concentrations of 1,1-DCE, cis-1,2-DCE, ethylbenzene, toluene, 1,1,1-TCA, TCE, and total xylenes exceeded NYSDEC Subpart 375-6 Unrestricted Use SCOs. An initial horizontal excavation limit was established following the same footprint of the previously excavated area (approximately 14 ft by 18 ft, by 6 ft deep). The 2014 IRM scope was to remove the top 0 to 6 ft of previous clean fill and excavate material from 6 to 8 ft bgs. Elevated Photoionization Detector (PID) headspace readings on side wall and bottom samples were observed following excavation of the 6 to 8 ft bgs interval, and reported to NYSDEC. Due to the depth of observed elevated PID readings and below-average shallow groundwater elevations, an additional 2 ft of soil was removed from the side walls (where physical constraints allowed) and from the bottom of the excavation. Characterization samples from the side walls and bottom of the excavation were collected and resulted in VOC detections exceeding Unrestricted Use SCOs. Refer to the 2014 IRM Construction Completion Report (CCR)

for characterization sample results and for the location of the VOC IRM. With approval from the NYSDEC, no further excavation of soil took place; impacts were left in place to be addressed as part of the groundwater IRM, since all impacted material was below the water table. Prior to backfilling, and with approval from the NYSDEC, 270 pounds of Klozur® CR engineered calcium peroxide was placed on the bottom of the excavation area and mixed with the small amount of groundwater that had accumulated in the excavation. Fill from the 2005 IRM and imported fill in compliance with NYSDEC DER-10 was used to backfill the excavation areas created for this IRM.

Following the completion of the IRMs in November 2014, AECOM submitted a draft IRM CCR on February 15, 2015 describing those 2014 IRMs. The 2014 IRM CCR was written in compliance with DER-10 Section 5.8, Construction Completion Report and Final Engineering Report, and summarizes these IRM activities. The Final 2014 IRM CCR was approved by NYSDEC on March 27, 2015 (AECOM, March 2015).

Sub-slab Soil Vapor Interim Remedial Measure

On November 4, 2014, AECOM and NYSDEC inspected the concrete floor of the boiler room and AECOM sealed visible floor cracks with concrete caulking. In addition, the annulus between a drain line effluent and the associated floor penetration foundation perforations was sealed with expanding foam. Two other foundation perforations (drains) were observed and temporarily plugged with modelling clay just prior to a sampling event. The floor drains appeared to discharge to the bedding gravel beneath the concrete floor slab. On December 24, 2014 one sub-slab vapor sample, one indoor vapor sample, one ambient (outdoor) air sample, and an associated quality assurance / quality control sample were collected from the boiler room building at AVOX Plant 1, to determine if CVOCs were currently at indoor concentrations sufficiently elevated to trigger a need for mitigation activities. The December 2014 indoor air sample did not detect any chlorinated VOCs listed in the NYSDOH Guidance document. The 2014 sub-slab vapor sample detected 1,1,1-TCA, cis-1,2-DCE, 1,1-DCE, PCE, and TCE. According to the NYSDOH decision matrices, PCE and TCE concentrations trigger an action of ‘monitor’ only, while the 1,1,1-TCA, cis-1,2-DCE, and 1,1-DCE concentrations are below an action level. Low concentrations of 1,1,1-TCA, cis-1,2-DCE, and TCE were detected in the ambient (outdoor) air sample. The sealing of floor cracks and foundation perforations have decreased the concentrations in the indoor air samples and lowered the action level from ‘mitigation’ to ‘monitoring’ (AECOM, January 2015).

Groundwater Interim Remedial Measure

In 2014, an IRM pre-design investigation utilizing a combined membrane interface probe (MIP) and hydraulic profiling tool (HPT) was performed in Area 1; refer to **Figure 9** for MIP locations. That pre-design investigation was performed in accordance with the MIP/HPT and Baseline Sampling Work Plan (AECOM, October 2014).

On November 24-25, 2014, 11 borings were completed throughout the groundwater plume in Area 1 to a depth of 20 ft bgs, with the objective of verifying the distribution of VOC COPCs within that area. The MIP/HPT was used to capture data at continuous depths at each boring. The MIP is a percussion tolerant VOC sensor that can continuously log VOCs that diffuse through a semi-permeable membrane. Using a carrier gas, the VOCs are brought to the surface through tubing which is connected to a laboratory grade halogen specific detector (XSD), PID, and flame ionization detector to provide immediate analysis. Concurrently, the HPT allows the user to create continuous real-time profiles of soil hydraulic properties in both fine-grained and coarse-grained material. The HPT uses a sensitive downhole transducer to measure the pressure response of the soil to injection of water. Injection pressure is a measure of the hydraulic properties of the soil; a relatively high

pressure response indicates a higher proportion of clays and fine-grained materials, whereas a relatively low pressure response indicates a larger grain size and a higher K value.

The 3D Imaging Summary, MIP/HPT Boring Summary, and MIP Data Cross Section figures summarize the field activities and results of the MIP/HPT analysis. XSD data were used as the prime indicator of CVOC impacts, as they are highly sensitive to chlorinated VOCs compared to the other data collection methods. Within the investigated zones, target treatment depths were identified using K data provided by the HPT analysis. The MIP/HPT results were generally consistent with groundwater data collected from June 2010 through June 2011. The data indicated that there are lower VOC concentrations present in the northern portion of the Site and that, where present, they are limited to the upper 14 ft of the overburden. In the southern portion of the Site, VOC concentrations were greater and also present in significant concentrations throughout the entire depth of the soil borings, with the 5-15 ft bgs region exhibiting the highest XSD response. In addition to MIP-8 located in the center of the groundwater plume, the easternmost and westernmost boring locations, MIP-1 and MIP-11, showed the highest VOC concentrations.

Remedial activities for the groundwater IRM were described in the Final Remedial Action Work Plan - 2015 Interim Remedial Measures - Groundwater Treatment (2015 IRM RAWP) (AECOM, March 25, 2015). On April 10, 2015 the NYSDEC provided approval to begin the described work per the 2015 IRM RAWP. In accordance with the AAR and the 2015 IRM RAWP, the remedial approach to address VOCs in Site groundwater was in-situ enhanced reductive dechlorination (ERD) via direct-push injections of Anaerobic Biochem (ABC®) with zero valent iron (ZVI), i.e., ABC+®. The final 2015 IRM CCR describes work completed to remediate VOCs in Site groundwater (AECOM, August 12, 2015). Refer to **Figure 9** for the injection zone details.

2.3 Remedial Action Objectives

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

The RAOs for the Site as listed in the Decision Document (NYSDEC, December 2015) are as follows:

2.3.1 Groundwater

- RAOs for Public Health Protection
    - Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
    - Prevent contact with, or inhalation of, volatile organic compounds from impacted groundwater.
- RAOs for Environmental Protection
    - Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

- Prevent the discharge of COCs to surface water.
- Remove the source of ground or surface water constituents of concern.

2.3.2 Soil

- RAOs for Public Health Protection
  - Prevent ingestion/direct contact with impacted soil.
  - Prevent inhalation of or exposure from contaminants volatilizing from soil.
- RAOs for Environmental Protection
  - Prevent migration of constituents that would result in groundwater or surface water contamination.

2.3.3 Soil Vapor

- RAOs for Public Health Protection
  - Mitigate impacts to public health resulting from existing, or the potential for, SVI into buildings at a site.

2.4 Contaminants of Concern

Eight COCs in groundwater have been determined through sampling associated with the RI and SRI. Per the Decision Document (NYSDEC, December 2015), Section 6.1.2 (NYSDEC, December 2015), a “contaminant of concern” is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all constituents identified on the Site are contaminants of concern. The groundwater COCs identified at the Site and their associated RAOs (Guidance or Standard Values - NYSDEC, Division of Water, TOGS 1.1.1 [NYSDEC, 1998, with addenda through 2004]) are listed below:

- 1,1,1-TCA – 5 µg/L
- 1,1,2-TCA – 5 µg/L
- 1,1-DCA – 5 µg/L
- 1,1-DCE – 5 µg/L
- 1,2-DCA – 0.6 µg/L
- PCE – 5 µg/L
- TCE – 5 µg/L
- VC – 2 µg/L

3.0 Groundwater Monitoring Program Summary

The following sections provide a summary of the groundwater monitoring program completed during the reporting period (December 29, 2015 through April 12, 2017); a comparison of the groundwater data collected from the most recent monitoring event (April 2017) to the COCs and historical groundwater analytical data; and conclusions regarding the monitoring completed and the resulting evaluations regarding remedial performance, effectiveness, and protectiveness.

3.1 Groundwater Monitoring Activities

In accordance with the SMP, the groundwater monitoring program to date consisted of multiple sampling events including six comprehensive quarterly monitoring events (July 2015, April 2016, July 2016, October 2016, January 2017, and April 2017). These sampling events followed the IRMs described in Section 2.2.3.7 to determine the effectiveness of the groundwater remedy. Quarterly sampling began in July 2015, following approval of the SMP and receipt of the Certificate of Completion in December 2015.

Quarterly sampling was performed at 17 wells, two temporary piezometers screened in the storm sewer pipe bedding, and one on-Site storm water catch basin; refer to **Figure 3** for the location of sampling points. Groundwater samples from the 17 monitoring wells were analyzed for VOCs and total organic carbon (TOC). Six monitoring wells (three shallow overburden and three deep overburden) were sampled for monitored natural attenuation (MNA) parameters. Two monitoring wells (one shallow overburden and one deep overburden) were sampled for concentrations of dechlorinating bacteria. The two temporary piezometers screened in the storm sewer pipe bedding, and one on-Site storm water catch basin were analyzed for VOCs only. The groundwater monitoring program is summarized in **Table 1.**

Monitoring of groundwater conditions at this Site includes both groundwater level measurements and groundwater sampling and analysis. All monitoring and laboratory data, including quality assurance / quality control (QA/QC) samples, have been uploaded to the NYSDEC EQuIS database. In addition, groundwater purge data, water levels, VOC, TOC, MNA, and microbial data from these five quarterly events, as well as groundwater data collected prior to the IRMs, are summarized in **Appendix A**.

Groundwater samples were divided into three different groups based on historical analytical concentrations from individual wells; plume wells, downgradient wells, and upgradient wells (refer to **Table 2** for monitoring well, piezometer, and catch basin specifications). To the extent practicable, wells were sampled from lowest to highest historical VOC concentrations. QA/QC samples included field duplicates, rinse blanks, and trip blanks, and were collected per rates stated in the SMP.

In accordance with the work plan, standard low-flow sampling procedures were followed, each well was purged using a peristaltic pump with dedicated/disposable polyethylene tubing. During purging, field parameters (pH, dissolved oxygen, oxidation reduction potential, specific conductance, turbidity, and temperature) were measured and recorded. Refer to **Appendix A** for final readings prior to sample collection from each well. Purging continued until field parameters had stabilized, and between three and five well volumes had been purged. After purging was complete, groundwater samples were collected from the wells, with VOC samples being collected first.

Grab samples were collected from the catch basin and temporary piezometers screened in the storm sewer pipe bedding. In some instances, field parameters were collected during sampling of these features; data is included in **Appendix A**.

A discussion of the groundwater analytical results for the five quarterly sampling events as well as a detailed discussion of the most recent quarterly event (April 2017) are described below.

3.1.1 Quarterly Groundwater Sampling

AECOM collected comprehensive rounds of groundwater samples in July 2015, April 2016, July 2016, October 2016, January 2017, and April 2017 in accordance with the procedures outlined in the SMP. Seventeen monitoring wells were sampled using low flow methods, including 10 shallow overburden wells, six deep overburden wells, and one well screened through both shallow and deep overburden units. In addition, grab samples were collected from one onsite stormwater catch basin and two temporary piezometers screened in the storm sewer pipe bedding. VOC samples were collected from all locations; TOC samples were collected from each shallow and deep overburden monitoring well; and MNA samples were collected from three shallow and three deep overburden wells. Groundwater analysis for VOC, TOC, and MNA was performed by TestAmerica, Inc. located in Amherst, New York. Microbial analysis was performed by Microbial Insights, Inc. located in Knoxville, Tennessee.

3.2 April 2017 Groundwater Elevation and Flow Direction

In addition to groundwater elevation data recorded from the 17 wells sampled each quarter, a comprehensive round of groundwater levels was measured from all Site wells and piezometers during the April 2017 sampling event. **Table 3** provides a summary of groundwater elevations measured on April 7, 2017.

Two groundwater surface contour maps for April 2017 are provided; shallow overburden groundwater surface contours are presented in **Figure 10** and deep overburden groundwater surface contours are presented in **Figure 11**; note the groundwater elevation from MW-30 was not included in the groundwater surface contour figures as the well is screened through both shallow and deep groundwater overburden units. Groundwater elevations measured April 2017 from the shallow overburden ranged from 686.18 ft above mean sea level (AMSL) at MW-43S to 688.79 ft AMSL at MW-14S. Groundwater elevations measured April 2017 from the deep overburden ranged from 680.96 ft AMSL at MW-35D to 686.31 ft AMSL at MW-40D. Based on these water level measurements, the groundwater beneath the Site indicates a northwest flow direction. This flow direction is most pronounced in the deep overburden, as the shallow overburden groundwater is influenced by Site features as described in Section 2.2.2.

3.3 April 2017 Groundwater Analytical Data

The April 2017 groundwater sampling event was the sixth comprehensive sampling event conducted at the Site since completion of the groundwater injection IRM in March 2015. VOCs detected in groundwater during the April 2017 sampling event are presented in **Table 4** and are compared to the Site RAOs or groundwater criteria presented in New York Codes, Rules and Regulations (NYCRR), Title 6, Part 702.15(a)(2) and 703.5. The following table summarizes the VOCs detected, their respective concentration ranges, the number of detections, and the number of those detections that exceeded Site-specific groundwater RAOs or groundwater criteria presented NYCRR.

Groundwater Contaminants of Concern Summary of Results
April 2017

VOCs Detected in Groundwater	Concentration Range (µg/L)	Number of Detections	RAO/NYCRR Exceedances
Acetone	3.3 - 480	7	2
Chloroethane	8.1 – 32,000	6	6
Vinyl chloride*	2.1 – 3,700	5	5
1,1-Dichloroethane*	1.2 – 4,100	4	4
1,1,1-Trichloroethane*	34 - 240	4	4
2-Butanone	28 - 930	4	2
cis-1,2-Dichloroethene	1.5 – 1,100	4	2
1,1-Dichloroethene*	6.2 - 220	3	3
Toluene	0.73 - 360	3	2
1,2-Dichloroethane*	74	1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	440	1	1
Methylene Chloride	39	1	1
trans-1,2-Dichloroethene	93	1	1
Ethylbenzene	5.7	1	1
Xylenes, total	13	1	1
2-Hexanone	1.3	1	0
Carbon Disulfide	0.27	1	0

Note: VOCs in the table above followed by an asterisk (*) are Site COCs.

A total of 17 VOCs were detected in groundwater from the monitoring wells during the April 2017 sampling event. Eleven of the 13 VOCs detected exceeded either the Site-specific RAOs or the NYCRR criteria for groundwater at one or more wells. Only five of the eight COCs were detected; all of which reflected a marked decrease in concentration of the parent VOCs (1,1,1-TCA, PCE, and TCE) following the IRMs. **Figures 12** through **19** illustrate April 2017 isoconcentration contours for COCs which were detected in shallow and/or deep overburden groundwater. **Figures 20** and **21** illustrate April 2017 isoconcentration contours for TVOCs in shallow and deep overburden groundwater respectively.

The highest concentrations of VOCs in shallow overburden groundwater were detected at A1-GP-10 and MW-42S. The highest concentrations of VOCs in deep overburden groundwater were detected at MW-36D and MW-40D. Chloroethane, 1,1-DCA, VC and cis-1,2-DCE exhibited the highest overall concentrations in groundwater, all of which are daughter products of 1,1,1-TCA, PCE, and/or TCE.

3.4 April 2017 Storm Sewer Catch Basin and Storm Sewer Pipe Bedding Analytical Data

VOC data collected from the on-Site catch basin CB-1 exhibited 10 compounds, with all but one compound (total xylenes at 1.8 µg/L) showing a decrease in concentration following the IRMs. Five of the eight COCs were detected, and only two compounds exceeded the RAOs (1,1,1-TCA at 13 µg/L and 1-1,DCA at 5.1 µg/L).

VOC data collected from the two temporary piezometers screened in the storm sewer pipe bedding (TP-05 and TP-06) were below the detection limits, with the exception of one detection of cis-1,2-DCE

at TP-06. This detection (0.95 µg/L) was below the RAO of 5 µg/L, and below historical concentrations of this compound at this location.

Attached **Figure 3** shows the locations of the catch basin and temporary piezometers; analytical data is summarized in **Appendix A**.

3.5 Comparison of April 2017 COCs in Groundwater with Pre-IRM Groundwater Analytical Data

As previously described, quarterly groundwater quality data obtained during the reporting period, with the exception of the April 2017 sampling event, has already been submitted to the NYSDEC in quarterly summary reports. Trend plots illustrating concentrations of COCs (1,1,1-TCA, 1,1,2-TCA, 1,1-DCA, 1,1-DCE, 1,2-DCA, PCE, TCE, and VC) over time are provided in **Appendix B**. Because concentrations of TCE were historically the highest of the COCs detected at the Site, a discussion of historical and current TCE concentrations in groundwater at Site monitoring wells and piezometers is provided below.

In April 2017, TCE was not detected at any of the wells; TCE was detected at the on-Site catch basin (CB-1) at 0.97 µg/L but below the RAO of 5 µg/L. Based on the substantial decrease in concentration of TCE at locations with historical detections of TCE, the injection of ABC+® appears to continually degrade TCE. This is most clearly demonstrated on the trend plots in **Appendix B** for monitoring wells A1-GP02-S, MW-42S, and MW-38D.

3.6 Groundwater MNA Data Summary

The use of the ERD amendment ABC+ was designed to provide needed nutrients, such as a soluble lactic acid carbon source, a phosphate buffer to control pH for optimum microbial growth, and zero valent iron which accelerates abiotic dechlorination of chlorinated ethenes and ethanes. The microbial analysis from Bio-traps placed on site indicated that the necessary microflora, such as *Dehalococcoides* (DHC) species producing the enzymes tceA reductase and vinyl chloride reductase, are present in the subsurface. Stimulation of the bacteria by the presence of chlorinated solvents, combined with the extra nutrients supplied by injection, have dramatically reduced the concentrations of original parent CVOCs TCE and 1,1,1-TCA over time. The initial concentrations of known TCA degradation products (1,1-DCA and chloroethane), as well as of TCE/PCE degradation products (1,2-DCE isomers and VC), suggested that advanced decomposition of the chlorinated solvents had already enhanced microbial populations which would use CVOCs as substrates. Induction of reducing conditions can accelerate the reductive dechlorination of parent solvents and increase the relative accumulation of degradation intermediates such as VC before complete mineralization. As more aerobic conditions return after treatment, then VC oxidizing bacteria should increase and complete the dechlorination to ethene and co-metabolic oxidation followed by complete mineralization. In the event that continued monitoring indicates this process has plateaued, then additional amendments or subsurface microbial characterization may be performed to attempt to further enhance degradation.

3.7 Dechlorinating Bacteria Analysis

Following the injection of ABC+®, AECOM deployed “Bio-traps” in both the shallow and deep overburden groundwater wells to monitor the concentration (i.e., cells/bead) of dechlorinating bacteria. The “Bio-traps” were submitted to Microbial Insights, Inc., in Knoxville, Tennessee for analysis. Per the April 2017 analysis, both shallow and deep overburden groundwater show a general increase of *Dehalococcoides*, tceA Reductase, BAV1 VC Reductase, and VC Reductase bacteria, with

concentration levels indicating that reductive dechlorination will yield a generally useful biodegradation rate (Lu et al., 2006). Refer to tables below and **Appendix A** for microflora data.

Shallow Overburden Dechlorinating Bacteria Data

Sample ID	MW-42S	MW-43S	MW-42S
Sample Date	7/27/15	7/12/16	4/12/17
Dechlorinating Bacteria (Cells/bead)			
Dehalococcoides	$<2.50x10^{1}$	$1.77x10^{2}$	$3.98x10^{4}$
tceA Reductase	$<2.50x10^{1}$	$1.58x10^{1}$	$1.28x10^{4}$
BAV1 VC Reductase	$<2.50x10^{1}$	$<2.50x10^{1}$	$<2.50x10^{1}$
VC Reductase	$<2.50x10^{1}$	$<2.50x10^{1}$	$1.04x10^{3}$

Deep Overburden Dechlorinating Bacteria Data

Sample ID	MW-38D	MW-38D	MW-38D
Sample Date	7/27/15	7/12/16	4/12/17
Dechlorinating Bacteria (Cells/bead)			
Dehalococcoides	$8.41x10^{2}$	$4.00x10^{4}$	$2.52x10^{4}$
tceA Reductase	$<2.50x10^{1}$	$1.78x10^{2}$	$7.24x10^{2}$
BAV1 VC Reductase	$1.20x10^{2}$	$2.22x10^{4}$	$2.20x10^{2}$
VC Reductase	$1.47x10^{1}$	$6.96x10^{2}$	$9.12x10^{2}$

3.8 Dechlorinating Chemical Analysis

In addition to the dechlorinating bacteria results, the presence and distribution of TCE daughter products (cis-1,2-DCE and VC) and 1,1,1-TCA daughter products (1,1-DCA and chloroethane) provide supportive evidence that the attenuation of TCE and 1,1,1-TCA and their daughter products, via reductive dechlorination, continues to occur in-situ at the Site. The occurrence and concentrations of these daughter products are directly related to the historic distribution of TCE and 1,1,1-TCA in the subsurface. A limited number of other VOCs were sporadically detected in groundwater at the Site, with the majority of these detections in groundwater located at wells A1-GP06-S, A1-GP10-S, MW-42S, and MW-40D; refer to **Table 3**.

3.9 Total Organic Carbon

Samples were collected for TOC analysis to monitor the concentration of available carbon sources for the optimum microbial growth. Although TOC concentrations are decreasing over time in the areas targeted for injection (refer to **Figure 9**), locations with the highest concentrations of COC's (A1-GP06-S, A1-GP10-S, MW-42S, MW-38D, and MW-40D) still have carbon concentrations above pre-injection levels. Refer to **Appendix A** for a summary of TOC concentrations and **Figure 22** and **Figure 23** for April 2017 TOC concentration isopleths in the shallow and deep overburden groundwater, respectively.

4.0 Site Inspection

This section describes quarterly site inspections, O&M tasks completed, and recommendations for improvements.

4.1 Boiler Room

On November 4, 2014, AECOM and NYSDEC inspected the concrete floor of the boiler room and AECOM sealed visible floor cracks with concrete caulking. In addition, the annulus between a drain line effluent and the associated floor penetration foundation perforations was sealed with expanding foam. Two other foundation perforations (drains) were observed and temporarily plugged with modelling clay just prior to a sampling event, as the floor drains appeared to discharge to the bedding gravel beneath the concrete floor slab. The sealing of floor cracks and foundation perforations has decreased the concentrations in the indoor air samples and lowered the regulatory action level from 'mitigation' to 'monitoring' (AECOM, January 2015).

The improvements established in the boiler room (which in normally not occupied) as a result of the corrective actions completed to address soil vapor intrusion concerns consist of caulking in the boiler room floor and the seal around the annulus of a drain pipe in the boiler room. These improvements were inspected quarterly during groundwater sampling events. As of the last quarterly inspection in April 2017, no maintenance of the seals was required. If the boiler room becomes occupied or its usage changes, additional treatment and/or control measures will be evaluated.

4.2 Monitoring Wells

Currently there are 22 1-inch diameter casing, piezometers screened in the shallow overburden zone which were installed during multiple Site investigations. During the RI, 14 2-inch diameter casing monitoring wells were installed; seven are screened in the shallow overburden zone, six are screened in the deep overburden zone, and one is screened in the bedrock. Refer to **Table 2** and **Figure 3** for a list and the locations of these monitoring wells and piezometers. Of these 36 wells and piezometers, 19 are sampled quarterly as part of the SMP (refer to **Table 1** and **Figure 3** for a list and the locations of these wells). Five of the wells sampled quarterly require maintenance activities (i.e., repair of flush mount road boxes and concrete pads). AECOM's subcontractor Matrix Environmental Technologies, Inc. (METI) is scheduled to perform the well rehabilitation activities with AECOM oversight during the next reporting period.

As mentioned above, 19 of the 36 wells and piezometers are included in the quarterly sampling program. During the next reporting period, AECOM will submit a proposal to NYSDEC to properly abandon the 17 wells and piezometers that are not included in the quarterly sampling program. METI would perform the well decommissioning activities, and AECOM would oversee the activity to assure conformance with NYSDEC's November 3, 2009 Groundwater Monitoring Well Decommissioning Policy.

5.0 Conclusions and Recommendations

Based on results of the groundwater analytical data collected during the reporting period, conclusions, upcoming Site-related activities, and a proposed monitoring and reporting schedule are presented below.

5.1 Conclusions

1. Groundwater elevations measured during April 2017 from the shallow overburden ranged from 686.18 ft above mean sea level (AMSL) at MW-43S to 688.79 ft AMSL at MW-14S. Groundwater elevations measured during April 2017 from the deep overburden ranged from 680.96 ft AMSL at MW-35D to 686.31 ft AMSL at MW-40D. Based on these water level measurements, the groundwater beneath the Site exhibits a northwest flow direction. This flow direction is most pronounced in the deep overburden, as the shallow overburden groundwater is influenced by Site features (e.g., sewer and utility systems).
2. The groundwater analytical data indicate that the IRMs were, and continue to be, successful in the attenuation of CVOCs.
3. The groundwater microbial analyses indicate that the necessary microflora, such as *Dehalococcoides* species producing the enzymes tceA reductase and vinyl chloride reductase, are present in the subsurface at sufficient concentrations.
4. VOC data collected from on-Site catch basin CB-1 in April 2017 exhibited a general decreasing trend in concentration following the IRMs.
5. Concentrations of VOCs in samples collected in April 2017 from the temporary piezometers screened in the storm sewer bedding were below the RAOs.
6. TOC data demonstrate that carbon concentrations in the areas targeted for injections remain above pre-injection levels, maintaining conditions for microbial growth.
7. Quarterly Site inspections of the boiler room have confirmed that the sub-slab mitigation controls (i.e., sealing visible floor cracks with concrete caulking and filling the annulus between a drain line effluent and the associated floor penetration foundation perforations with expanding foam) have not deteriorated or been compromised.

5.2 Recommendations

Based on information gathered during the current reporting period, the following recommendations are proposed for the Site:

1. Remove and replace existing floor crack caulking and drain pipe annulus seals in the boiler room.
2. Perform maintenance activities (i.e., repair of flush mount road boxes and concrete pads) on five wells currently included in the quarterly groundwater sampling program.
3. Submit a proposal to NYSDEC to abandon 17 of the wells and piezometers that are not included in the quarterly sampling program.

4. Perform three quarterly groundwater sampling events during the next reporting period, and a comprehensive groundwater sampling event in April 2018.
5. Continue quarterly inspections of the boiler room floor caulking and the seal around the annulus of a drain pipe.
6. Review and update the Site health and safety plans as needed.

5.3 Proposed Monitoring and Compliance Sampling Schedule

The proposed schedule for groundwater sampling at the Site during the next reporting period includes quarterly sampling of 17 wells, the on-Site catch basin, and two temporary piezometers screened in the storm sewer pipe bedding; refer to **Table 1** for a list of locations to be sampled and associated analyses.

It is anticipated that the next PRR will be prepared following the receipt of laboratory analytical results for the April 2018 comprehensive groundwater sampling event, and will include the results from groundwater sampling events scheduled for July 2017, October 2017, January 2018, and April 2018.

6.0 Evaluate Remedy Performance, Effectiveness, and Protectiveness

6.1 Institutional Controls and Engineering Controls Certification

As a component of the PRR requirement, included in **Appendix C** is the completed IC/EC certification form.

Institutional controls include:

1. Groundwater Use Restrictions
2. Land Use Restrictions
3. Site Management Plan
4. Soils Monitoring Plan
5. Groundwater Monitoring Plan
6. IC/EC Plan

Engineering controls include:

1. None listed.

7.0 References

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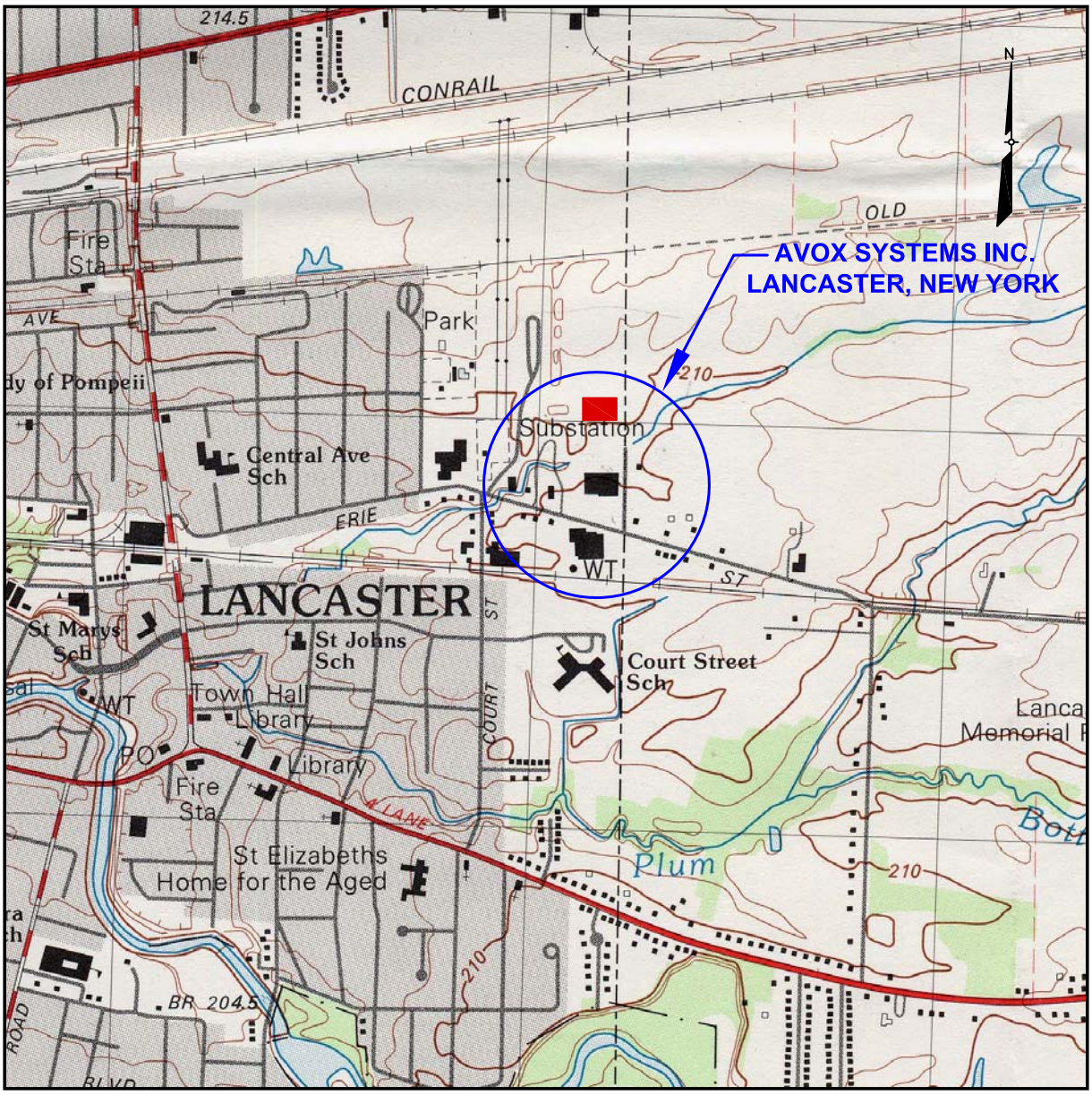
Figures



SOURCE:
1982 U.S. GEOLOGIC SURVEY 7.5 X 15 MINUTE TOPOGRAPHIC QUADRANGLE
LANCASTER, NEW YORK

LEGEND

AVOX PLANT 3 ADDED AFTER PUBLICATION OF LANCASTER, NEW YORK TOPOGRAPHIC QUADRANGLE.

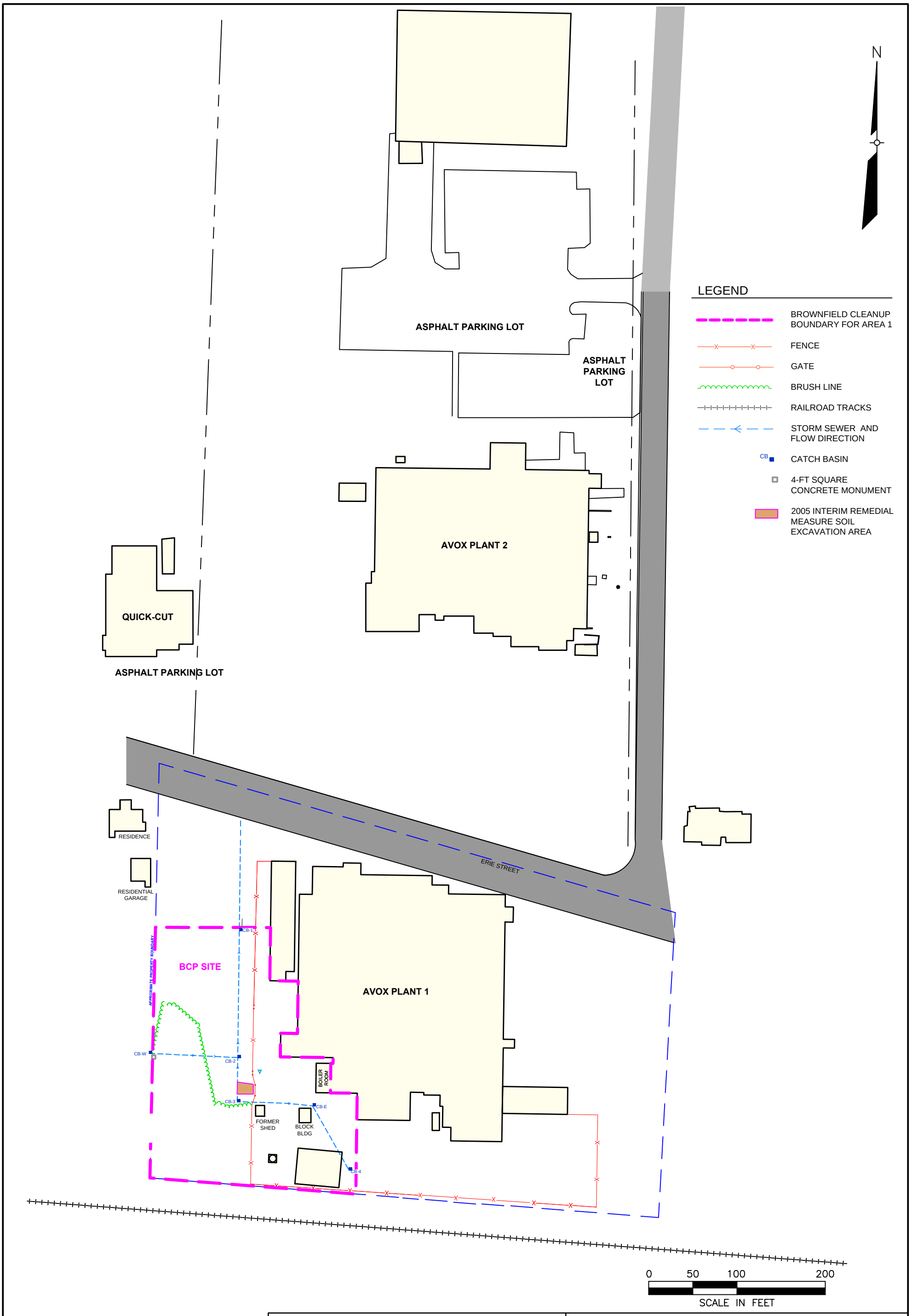
0 1000 2000
SCALE IN FEET

AECOM

FIGURE 1
SITE LOCATION MAP

FORMER SCOTT AVIATION FACILITY
LANCASTER, NEW YORK

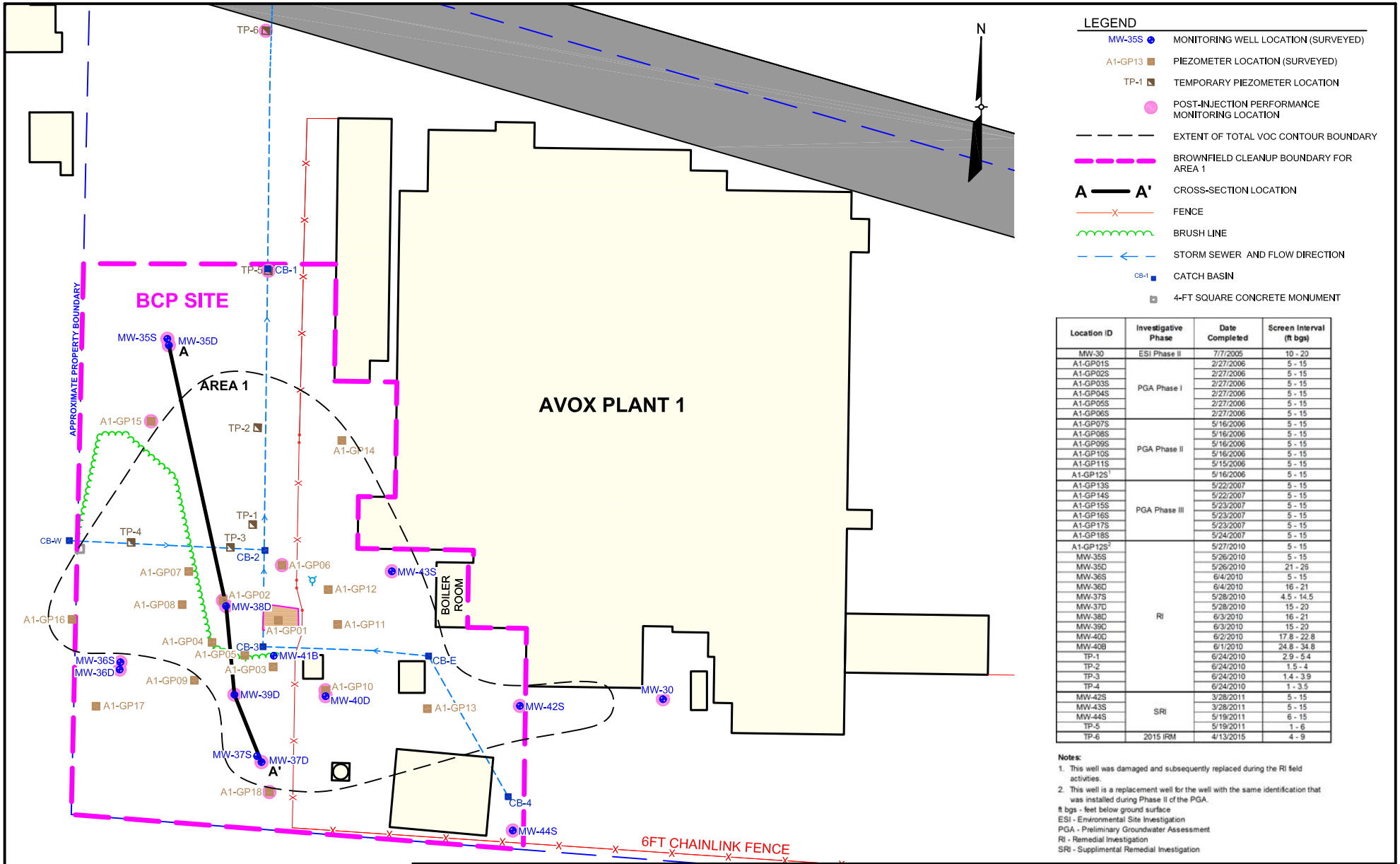
L:\work\60147012\CADD\60147012_063 Site Loc Map.dwg, 2/5/2015 11:06:33 AM, Splawnm



AECOM

FIGURE 2
SITE LAYOUT MAP

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK



Location ID	Investigative Phase	Date Completed	Screen Interval (ft bgs)
MW-30	ESI Phase II	7/7/2005	10 - 20
A1-GP01S	PGA Phase I	2/27/2006	5 - 15
A1-GP02S		2/27/2006	5 - 15
A1-GP03S		2/27/2006	5 - 15
A1-GP04S		2/27/2006	5 - 15
A1-GP05S		2/27/2006	5 - 15
A1-GP06S		2/27/2006	5 - 15
A1-GP07S	PGA Phase II	5/16/2006	5 - 15
A1-GP08S		5/16/2006	5 - 15
A1-GP09S		5/16/2006	5 - 15
A1-GP10S		5/16/2006	5 - 15
A1-GP11S		5/15/2006	5 - 15
A1-GP12S[1]		5/16/2006	5 - 15
A1-GP13S	PGA Phase III	5/22/2007	5 - 15
A1-GP14S		5/22/2007	5 - 15
A1-GP15S		5/23/2007	5 - 15
A1-GP16S		5/23/2007	5 - 15
A1-GP17S		5/23/2007	5 - 15
A1-GP18S		5/24/2007	5 - 15
A1-GP12S[2]	RI	5/27/2010	5 - 15
MW-35S		5/26/2010	5 - 15
MW-35D		5/26/2010	21 - 26
MW-36S		6/4/2010	5 - 15
MW-36D		6/4/2010	16 - 21
MW-37S		5/28/2010	4.5 - 14.5
MW-37D		5/28/2010	15 - 20
MW-38D		6/3/2010	16 - 21
MW-39D		6/3/2010	15 - 20
MW-40D		6/2/2010	17.8 - 22.8
MW-40B		6/1/2010	24.8 - 34.8
TP-1		6/24/2010	2.9 - 5.4
TP-2		6/24/2010	1.5 - 4
TP-3		6/24/2010	1.4 - 3.9
TP-4		6/24/2010	1 - 3.5
MW-42S	SRI	3/28/2011	5 - 15
MW-43S		3/28/2011	5 - 15
MW-44S		5/19/2011	6 - 15
TP-5		5/19/2011	1 - 6
TP-6	2015 IRM	4/13/2015	4 - 9

Notes:
1. This well was damaged and subsequently replaced during the RI field activities.
2. This well is a replacement well for the well with the same identification that was installed during Phase II of the PGA.

ft bgs - feet below ground surface
ESI - Environmental Site Investigation
PGA - Preliminary Groundwater Assessment
RI - Remedial Investigation
SRI - Supplimental Remedial Investigation

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FIGURE 3
MONITORING WELL, PIEZOMETER AND CATCH BASIN LOCATIONS

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60155991_126 MW Loc Map.dwg, 12/8/2015 4:42:02 PM, Splawnm

A
NORTH

A'
SOUTH

137.67'

45.88'

37.47'

MW-35D
EL. 688.9'

MW-38D
EL. 687.5'

MW-39D
EL. 687.4'

MW-37D
EL. 687.6'

FILL

SILT

CLAY

SILTY CLAY

SILT AND GRAVEL

0-6" TOPSOIL, brown (moist/dry)
6-9" tan SILT, trace f.sand (dry/moist)
9-20" reddish brown CLAY, trace silt, stiff (moist/dry)
0-15" reddish brown CLAY, trace silt, stiff (moist/dry)
0-20" reddish brown SILTY CLAY with 1mm silt layer (moist)
0-7" reddish brown SILTY CLAY, little SILT, (wet)
7-20" reddish brown CLAYEY SILT, thin silt layers interbedded (dry/moist)
0-24" reddish brown SILTY CLAY, mottled slightly (moist)
0-6" reddish brown SILTY CLAY, trace gravel
6-24" dark reddish/purple brown CLAY, trace silty clay, (moist) *color change
0-24" dark purple brown CLAY, (moist)
0-23" dark purple/brown CLAY, trace silty, trace gravel, slightly mottled, (moist)
0-24" dark purple-reddish brown CLAY, some silty layers, trace gravel, (moist)
0-24" purple/reddish brown CLAY trace silt, trace gravel, (moist)
0-24" purple/reddish brown CLAY trace silt, trace gravel, (moist), soft
0-20" reddish brown CLAY, little silty, trace gravel (moist-wet)
0-2" reddish brown CLAY, little silt, little gravel, (moist)
2-6" medium gray f-c SAND, some gravel, trace silt, (moist-wet), shale fragments in shoe

0-7" brown thick TOPSOIL (moist)
7-7" reddish brown SILT, little organics, trace clay, (moist)
0-22" reddish brown-tan-grey mottled SILT, little clay, trace f-m gravel (dry-moist)
0-24" reddish brown, tan-grey-olive mottled SILT, little clay (moist), wet silt layers 1" @24" (45ppm)
0-10" olive grey SILT (wet) (45ppm)
10-24" reddish brown - olive mottled SILT, trace clay, trace f. gravel (moist) PID - 0-243, 243@7" bgs
0-9" reddish brown-olive mottled SILT, little clay (moist) max PID = 45.2ppm
9-10" tan-grey f. sand, trace silt (wet), 110 ppm
10-24" reddish brown - purple SILT, some clay, trace gravel (moist-plastic), PID = 45 to 5ppm @ 24"
0-14" reddish brown-purple CLAY, trace silt, trace f-m gravel (moist) plastic
0-24" reddish brown-purple CLAY, trace silt, trace f-m gravel (moist), 4.5ppm @ 6" in silt
layer - 0 in remainder of sample
refusal - rock in shoe - auger to 16"
0-24" reddish brown-purple CLAY, trace silt, trace gravel (moist), 3.4ppm @ 17" in thin silt
layer (grey, moist) 0.0ppm in rest of core
0-10" reddish brown purple SILT and CLAY, little f-m gravel (moist)
10-15" dark grey SILT and rock chips (wet)
0-4" dark grey SILT and granite chips (moist)
refusal

0-7" dark brown TOPSOIL, moist
7-10" brown topsoil grading to CLAYEY SILT (moist)
10-12" reddish brown mottled with brown CLAYEY SiLT (moist)
0-24" reddish brown SILTY, little clay thin grey silt interbeds increases to bottom (moist)
0-24" reddish brown SILTY CLAY (moist) - more wet @ bottom, (18-20" grey
SiLT layer (moist-wet)) collect samples @ 5-6"
0-6" reddish brown - tan SILT, some clay (wet)
0-1.1 PID
6-12" reddish brown-tan mottled SILT, some clay, grey silt think interbeds (moist)
0-18" reddish brown CLAY, little silt, trace gravel (moist)
18-24" reddish brown to purple CLAY, some silt (grey interbeds), trace gravel (moist)
24-grey SILT (wet)
8-24" reddish brown, slightly purple CLAY, little silt, trace gravel (moist)
0-24" reddish brown to purple CLAY, little trace silt, trace gravel (moist), plastic
0-24" reddish brown - slightly purple CLAY, little grey silt interbeds (moist)
0-20" reddish brown-purple SILT and CLAY, trace grey silt layers (moist)
20-24" grey SILT and f-c GRAVEL, little f.sand (wet-moist)
bouncing spoon - shale

0-7" TOPSOIL
7-21" tan with reddish brown mottling, SILT, little clay, (moist)
0-19" reddish brown with grey/tan mottling, SILT, little clay, (dry-moist)
0-18" reddish brown with tan mottling, SILT and CLAY, (moist)
0-14" reddish brown with tan mottling SILT and CLAY, (moist)
14-16" tan SILT, trace clay, (wet)
16-21" reddish brown with tan mottling CLAY, some silt, thin grey silt layers,
(moist) sample 6-7"
0-24" reddish brown SILT, little clay light grey silt layers interbedded, (dry-moist)
0-24" reddish brown CLAY, little silt, trace f.gravel, (moist)
0-24" purple-reddish brown CLAY, trace silt, trace f.gravel, (moist), very plastic
0-24" purple-reddish brown with grey sile/f.sand layer, CLAY, trace silt, (moist)
0-24" reddish brown CLAY and SILT, f.sand and silt layers interbedded increasing to bottom - color change to grey to bottom, moist - wetter to bottom
0-22" medium grey CLAY and SILT (very moist), soft, trace f-c sand and gravel
22-24" medium grey f-c sand, trace silt, little rock chips (dry)

TD = 26'
TD = 21'
TD = 20'
TD = 20'

690
688
686
684
682
680
678
676
674
672
670
668
666
664
662

GROUND SURFACE ELEVATION (ft. AMSL)

LEGEND:

- FILL
- SILT
- CLAY
- SILTY CLAY
- SILT AND GRAVEL

TD = TOTAL DEPTH

GROUNDWATER ELEVATION (ft AMSL)

HORIZONTAL SCALE
0 10 20 40
SCALE IN FEET

VERTICAL SCALE
4x EXAGGERATION
0 2.5 5 10
SCALE IN FEET

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FIGURE 4
GEOLOGIC CROSS-SECTION

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

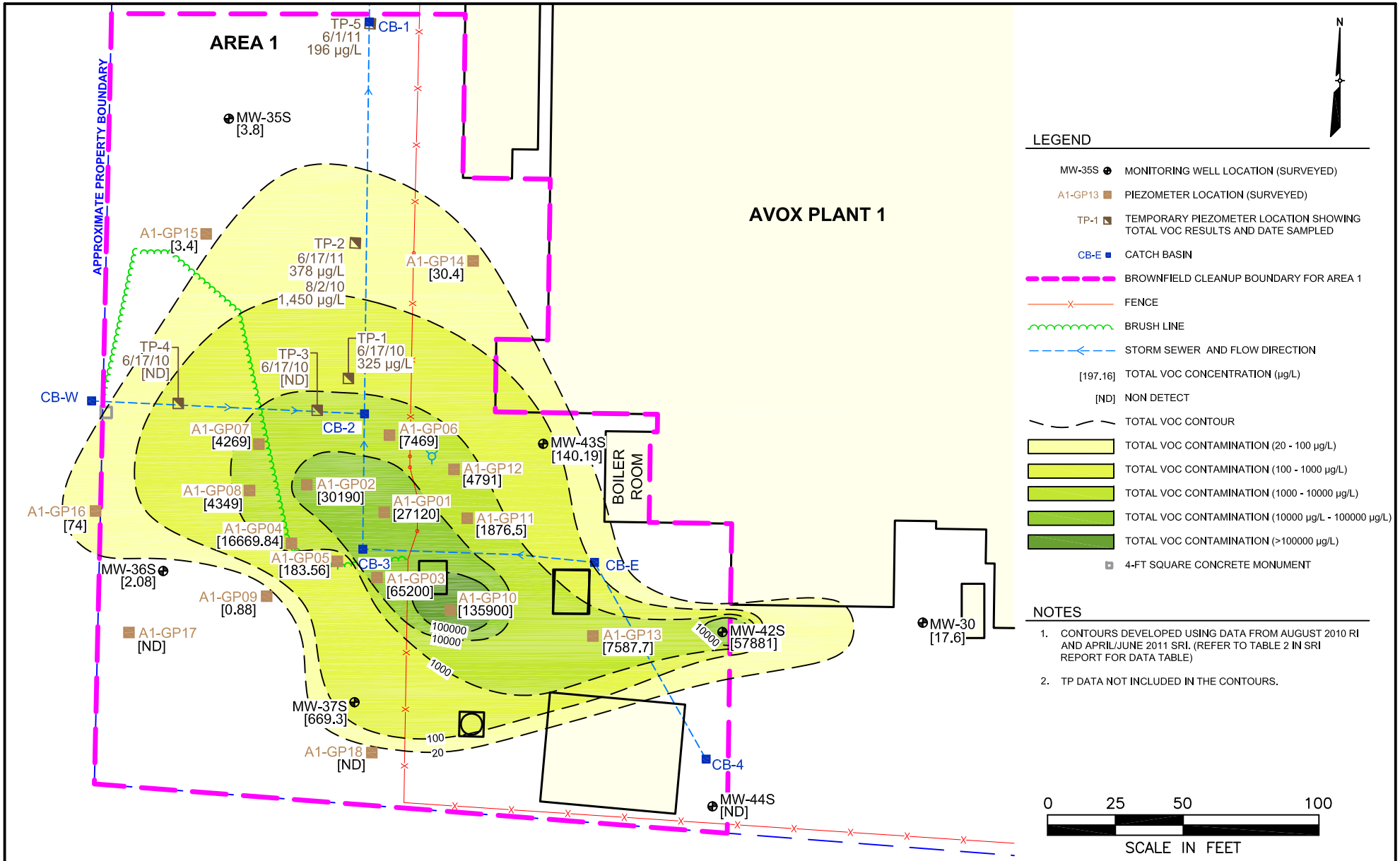

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FIGURE 5
PRE-INJECTION SHALLOW OVERBURDEN GROUNDWATER TOTAL VOC CONTAMINANT PLUME

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60155991_130 Total VOC Contaminant Plume_Aug2010.dwg, 6/6/2017 11:53:39 AM, Splawnm

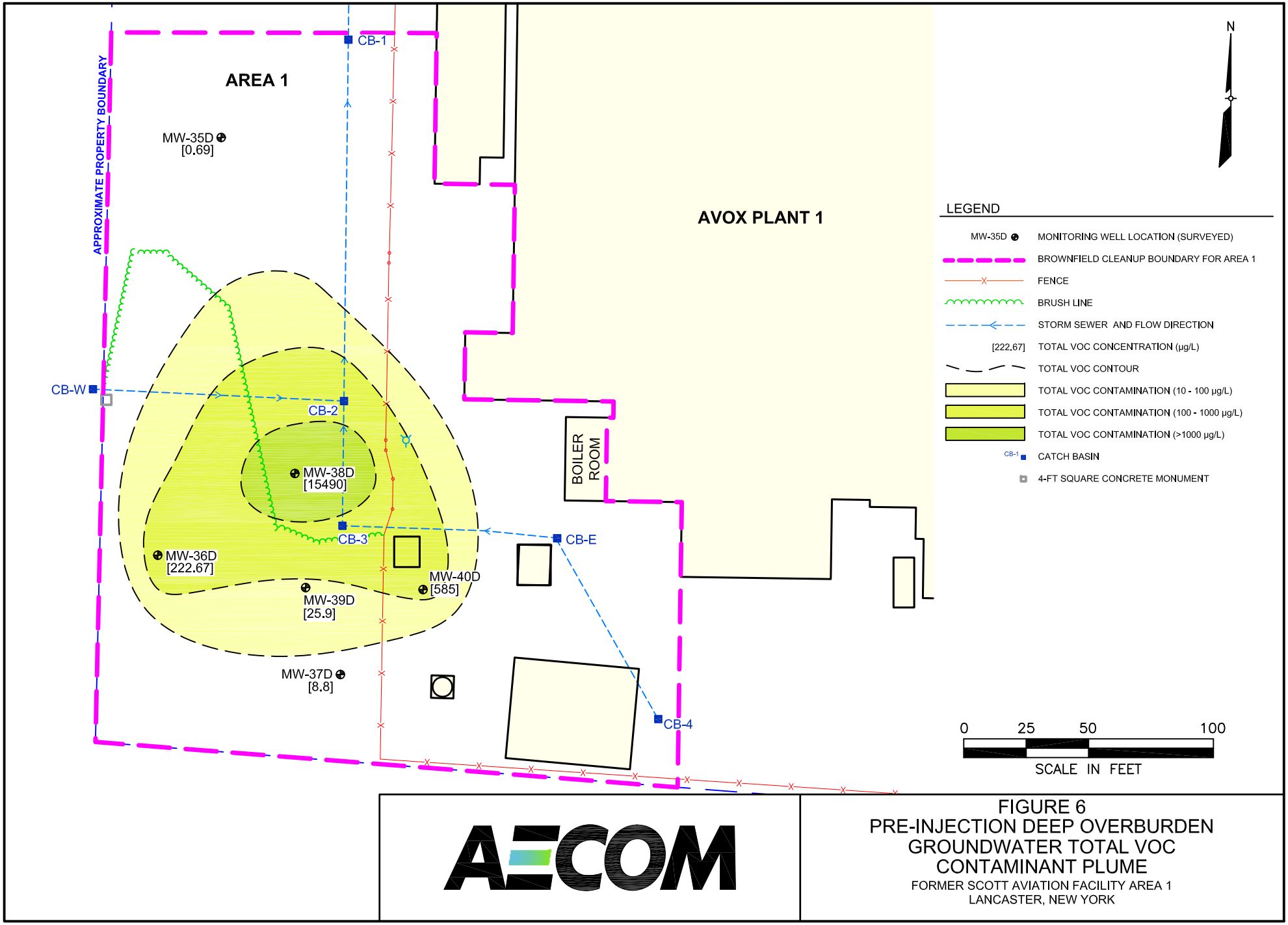

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FIGURE 6
PRE-INJECTION DEEP OVERBURDEN GROUNDWATER TOTAL VOC CONTAMINANT PLUME

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60155991_132 Total VOC Contaminant Plume_Deep Overburden GW Data_Aug2010.dwg, 6/6/2017 11:52:21 AM, Splawnm

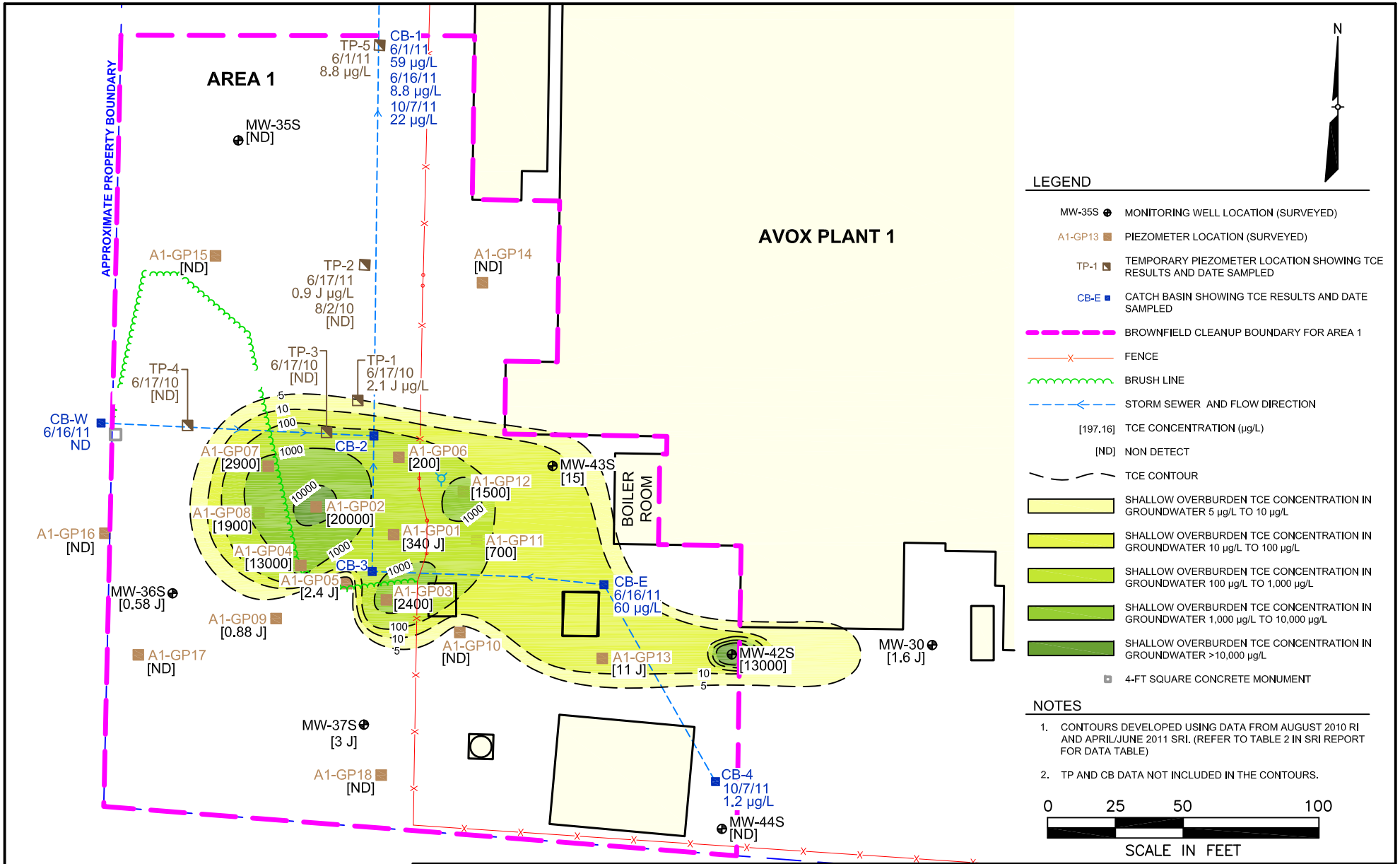

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FIGURE 7
PRE-INJECTION SHALLOW OVERBURDEN GROUNDWATER TCE CONTAMINANT PLUME

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60155991_131 TCE Contaminant Plume_Aug2010.dwg, 6/6/2017 11:53:09 AM, Splawnm

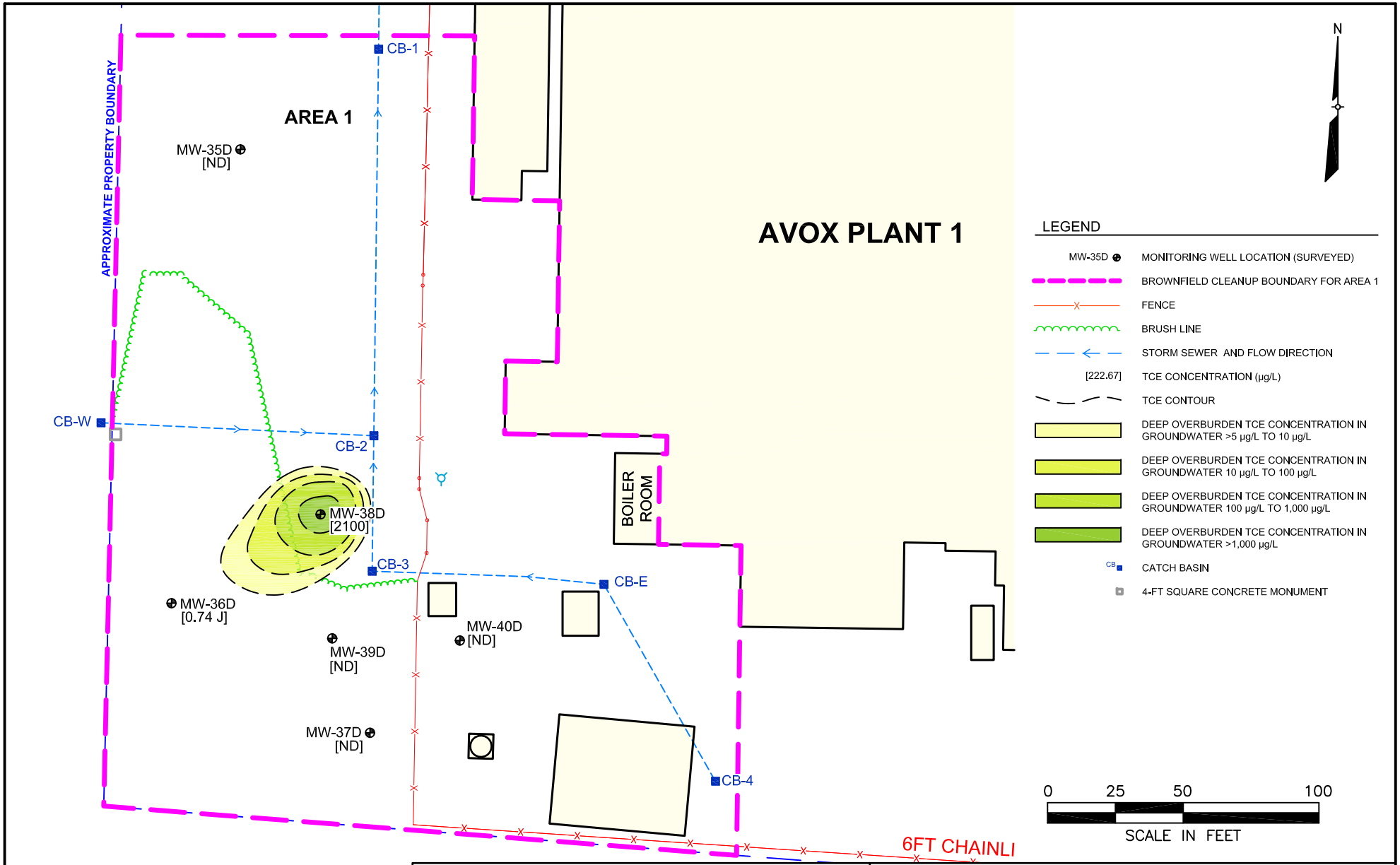

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FIGURE 8
PRE-INJECTION DEEP OVERBURDEN GROUNDWATER TCE CONTAMINANT PLUME

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60155991_140 Pre-Injection Deep Overburden GW TCE Plume.dwg, 6/6/2017 11:54:02 AM, Splawnm

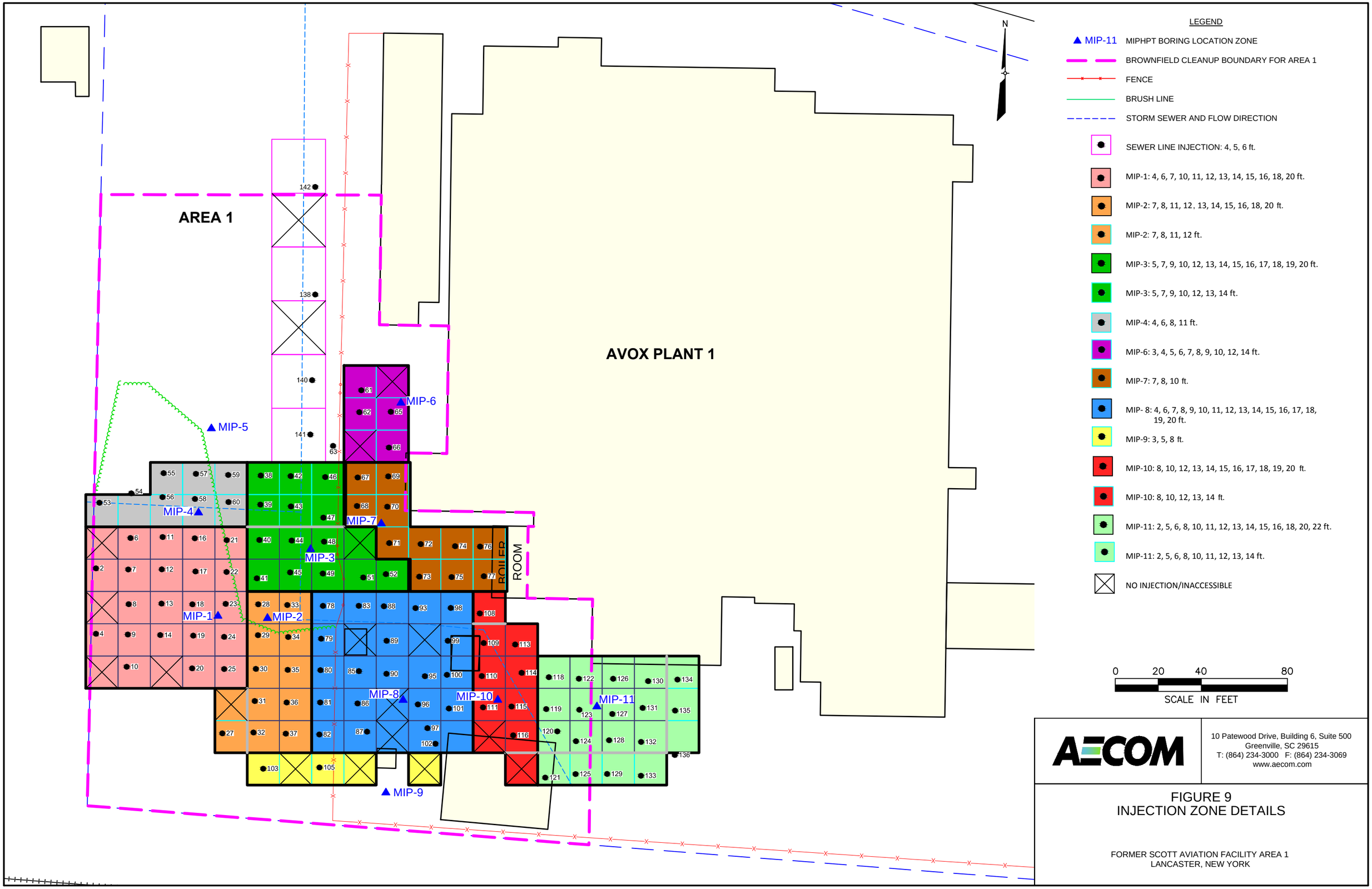

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FIGURE 9
INJECTION ZONE DETAILS

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

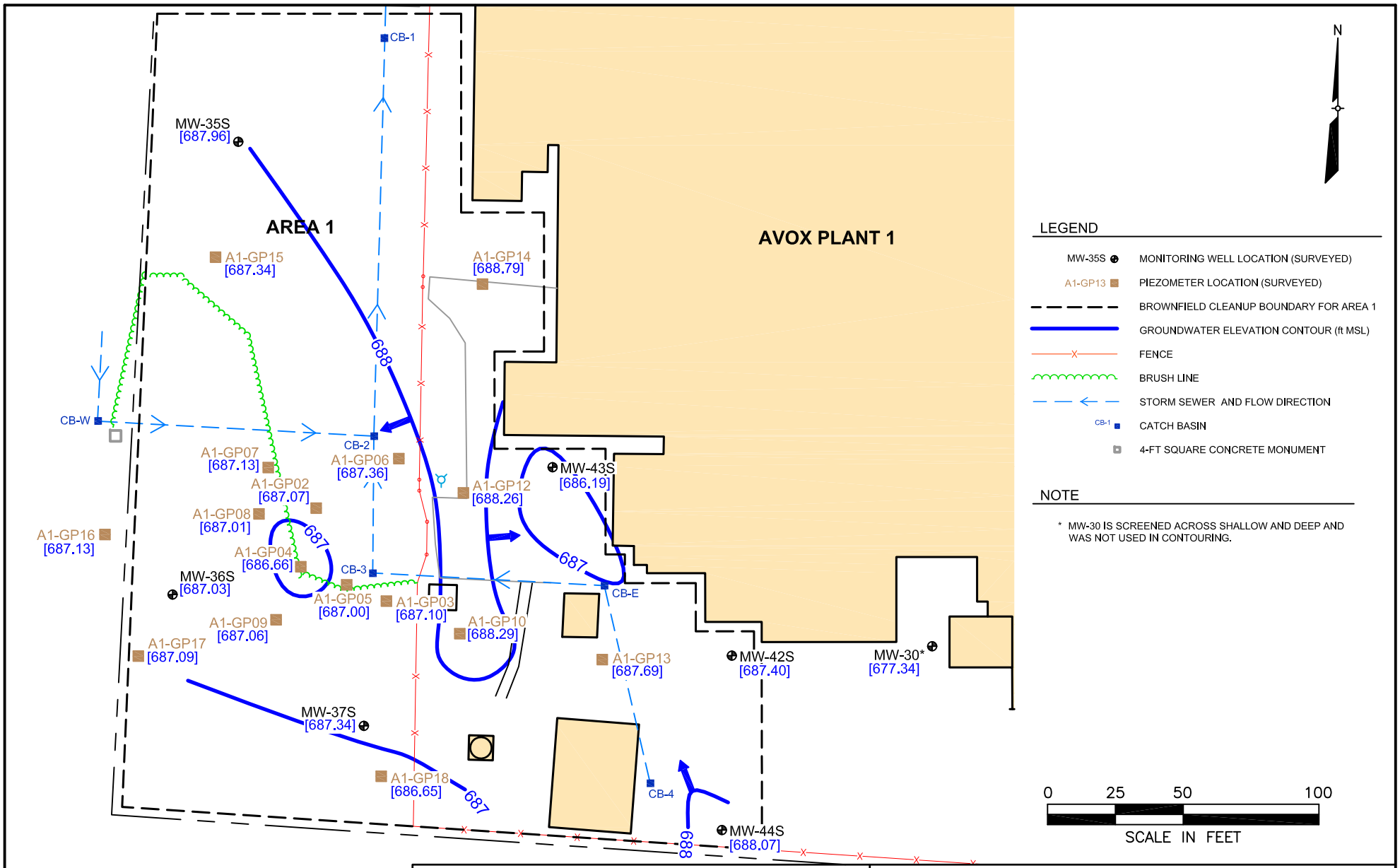

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FIGURE 10
SHALLOW OVERBURDEN GROUNDWATER SURFACE ELEVATION CONTOURS
APRIL 7, 2017

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_150 Shallow Overburden GW Surface Conts_Apr2017.dwg, 6/6/2017 12:06:54 PM, Splawnm

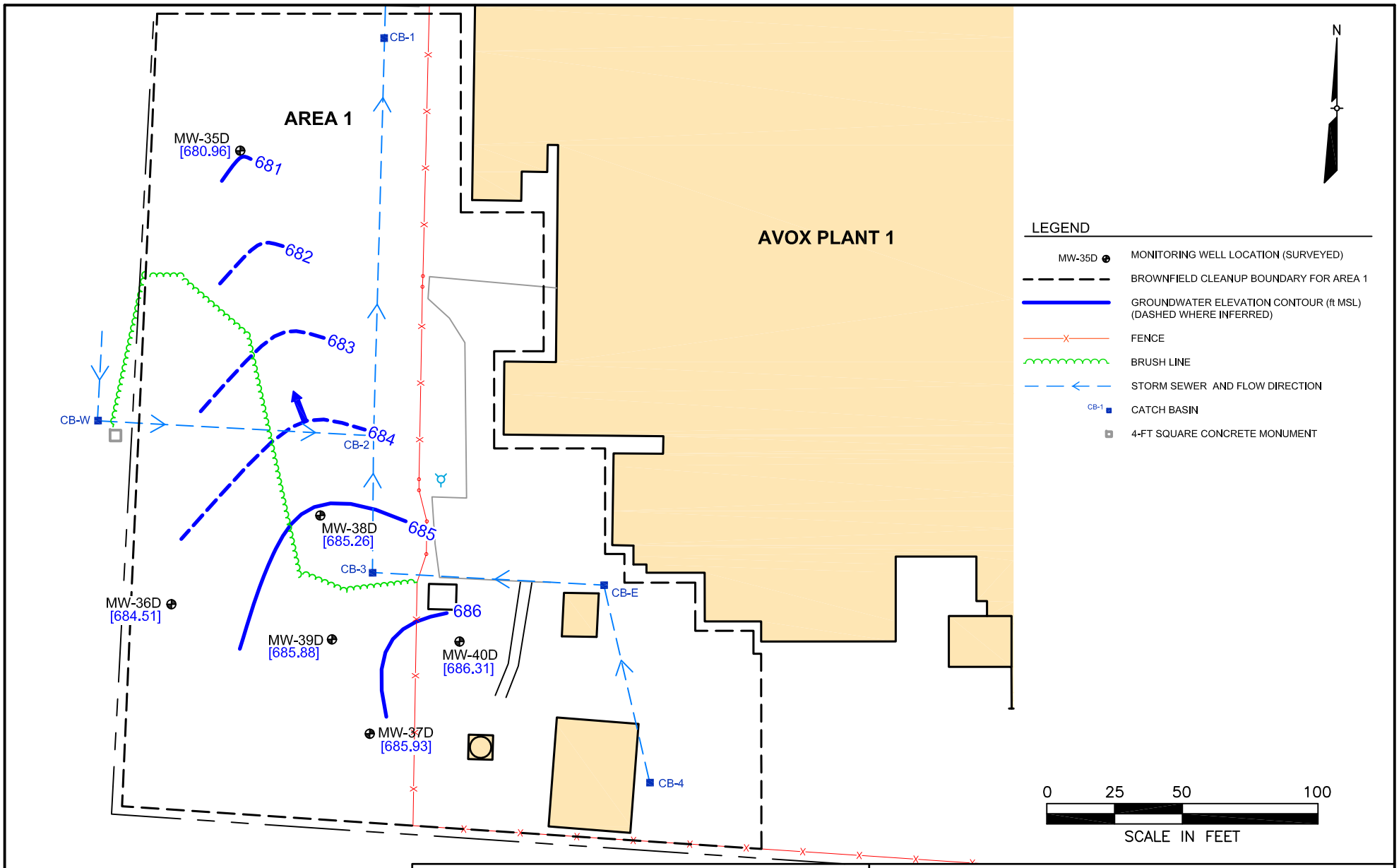

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FIGURE 11
DEEP OVERBURDEN GROUNDWATER SURFACE ELEVATION CONTOURS APRIL 7, 2017

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_151 Deep Overburden GW Surface Conts_April2017.dwg, 6/6/2017 12:01:55 PM, Splawnm

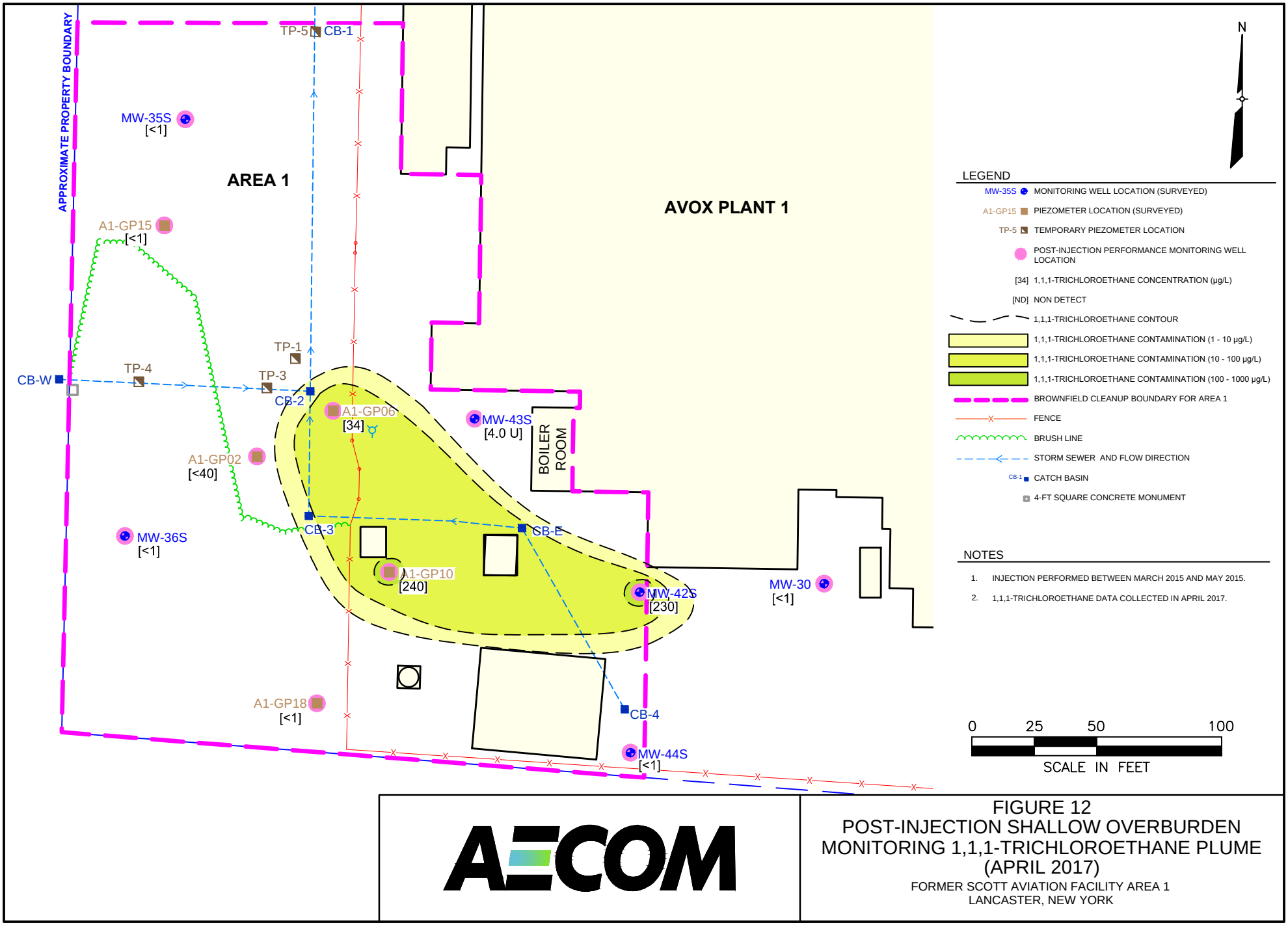

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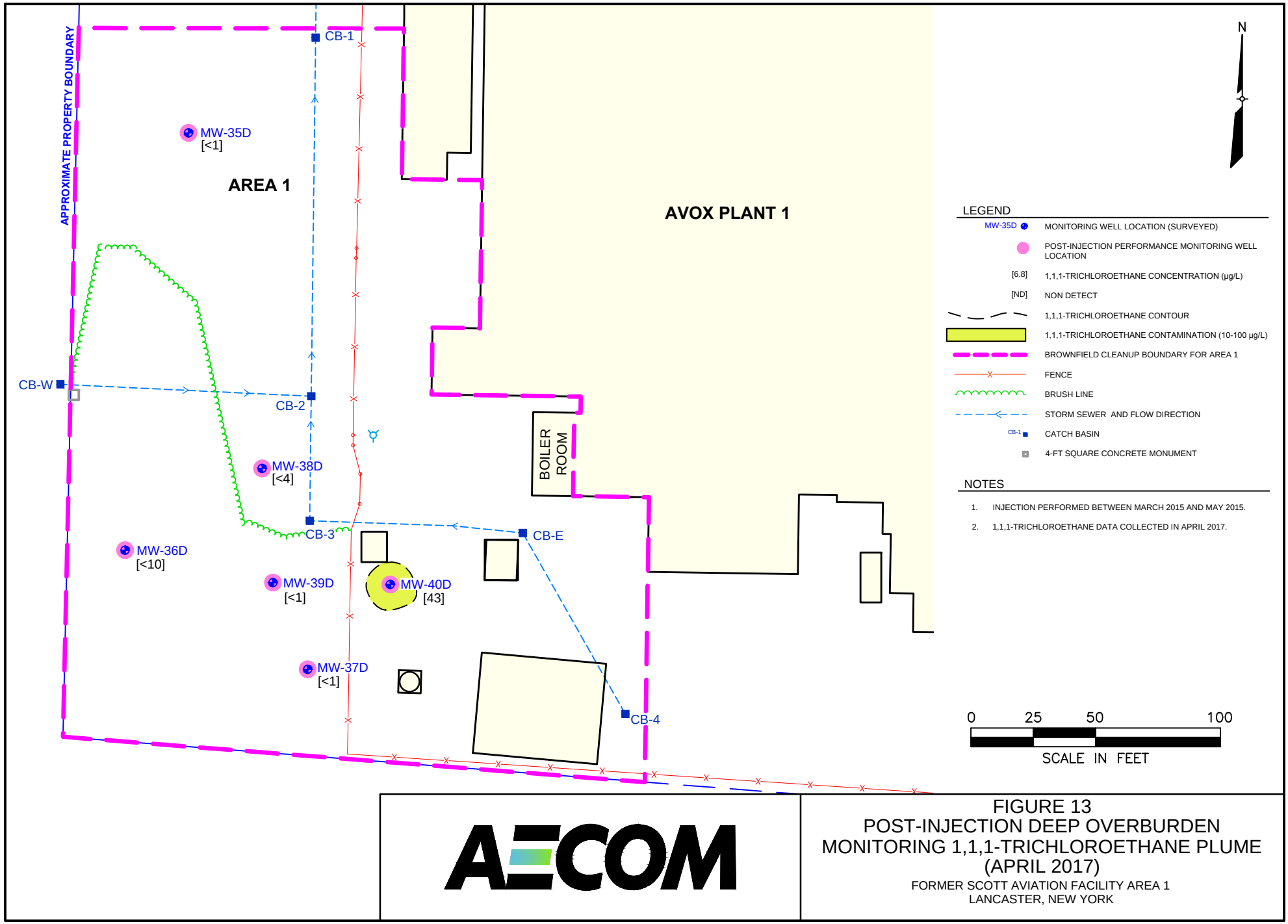
FIGURE 12
POST-INJECTION SHALLOW OVERBURDEN MONITORING 1,1,1-TRICHLOROETHANE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_153 1,1,1-TCA_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:20:46 PM, Splawnm



AECOM

FIGURE 13
POST-INJECTION DEEP OVERBURDEN MONITORING 1,1,1-TRICHLOROETHANE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_152 1,1,1-TCA_Deep Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:20:21 PM, Splawnm

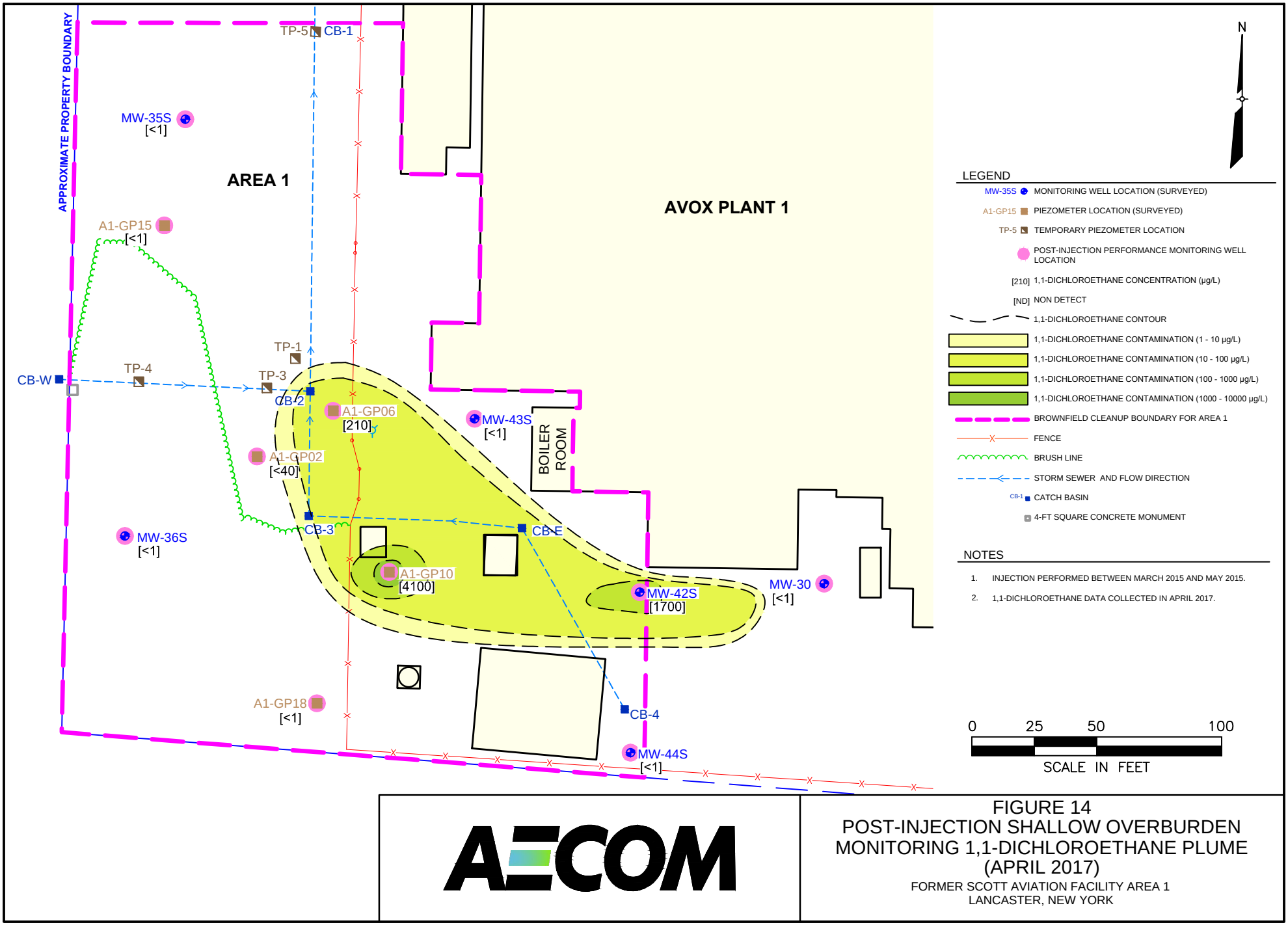


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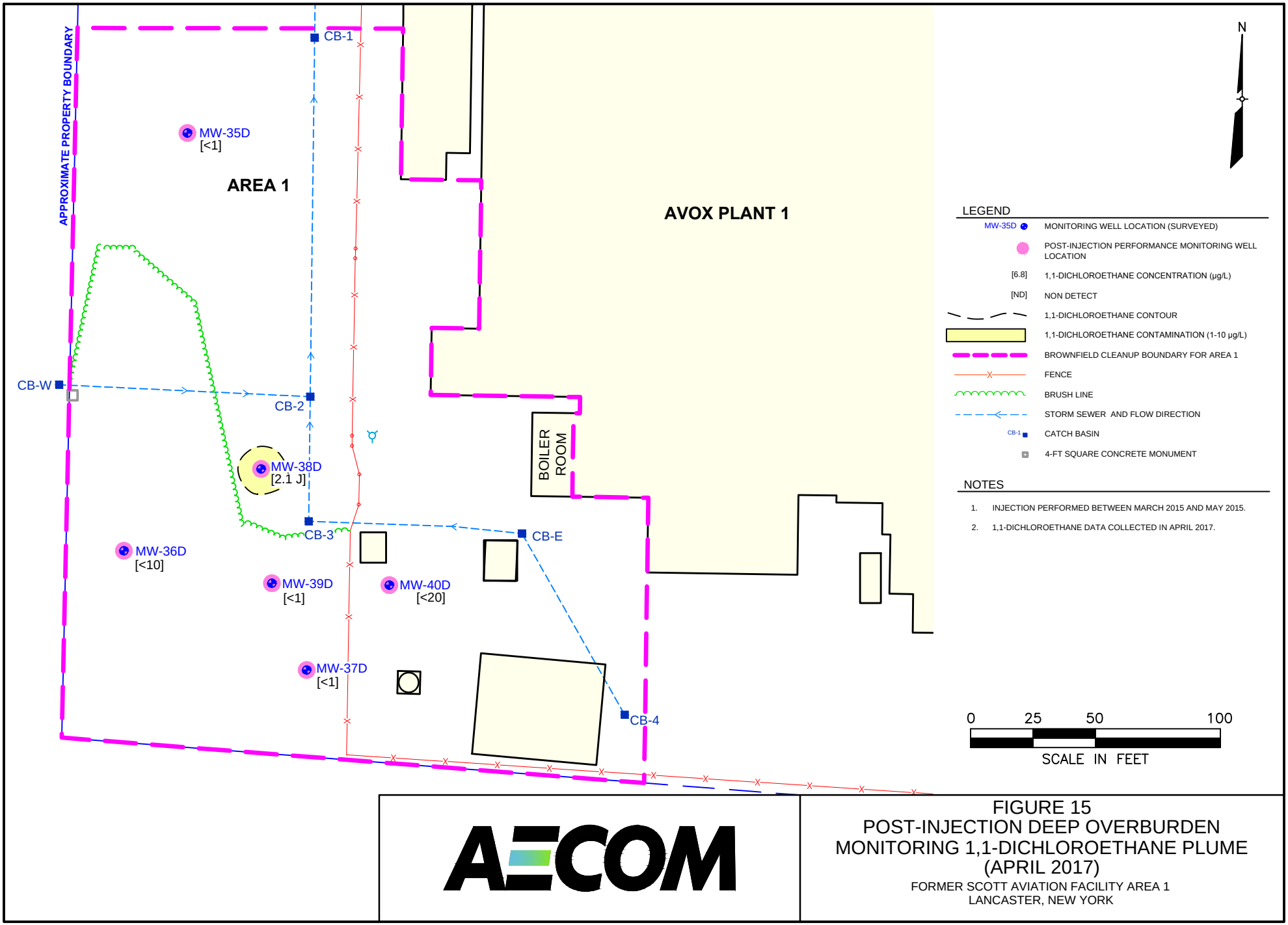
FIGURE 14
POST-INJECTION SHALLOW OVERBURDEN MONITORING 1,1-DICHLOROETHANE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_155 1,1-DCA_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:22:00 PM, Splawnm



AECOM

FIGURE 15
POST-INJECTION DEEP OVERBURDEN MONITORING 1,1-DICHLOROETHANE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_154 1,1-DCA_Deep Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:21:13 PM, Splawnm

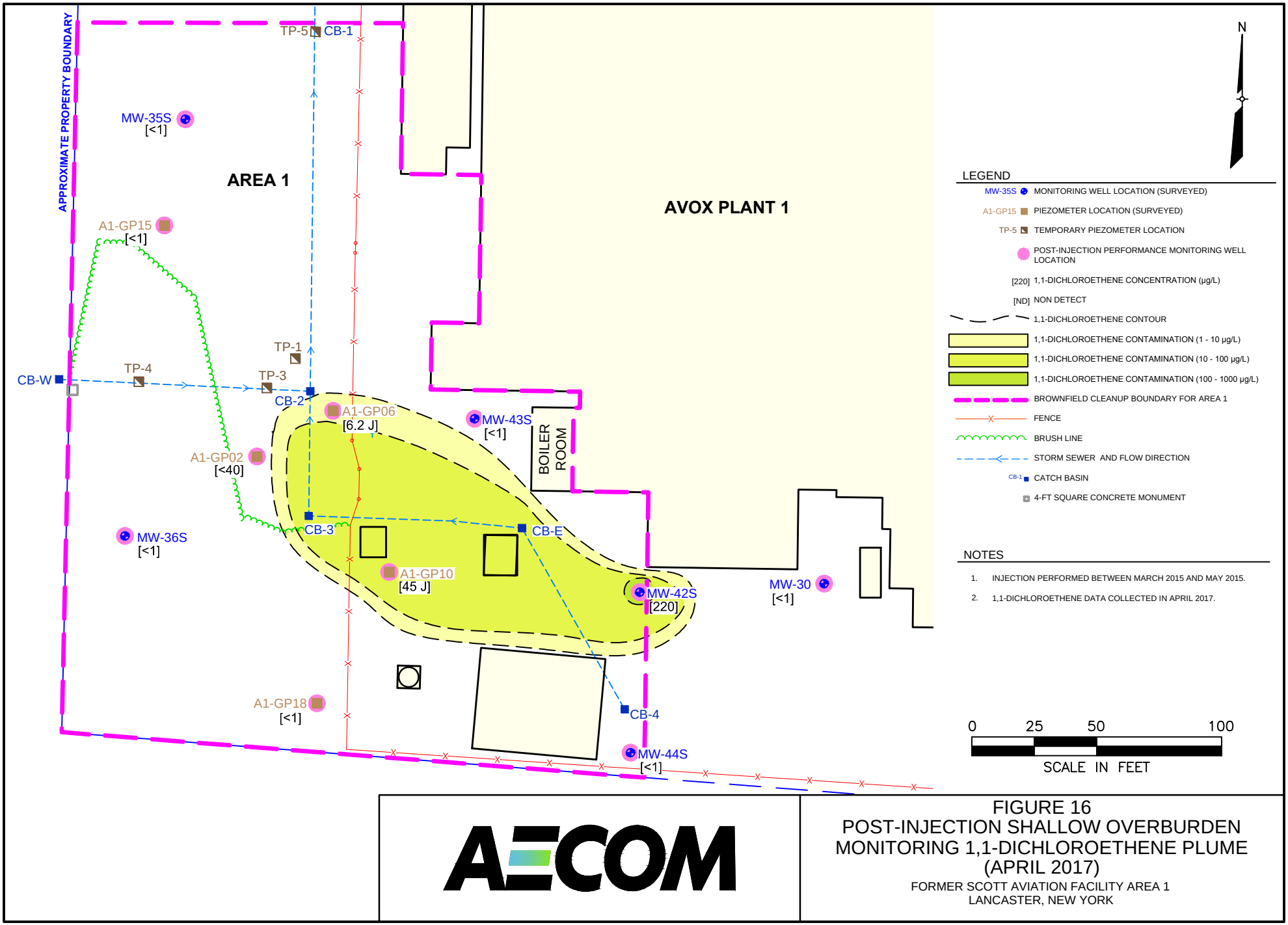


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FIGURE 16
POST-INJECTION SHALLOW OVERBURDEN MONITORING 1,1-DICHLOROETHENE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_157 1,1-DCE_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:23:13 PM, Splawnm

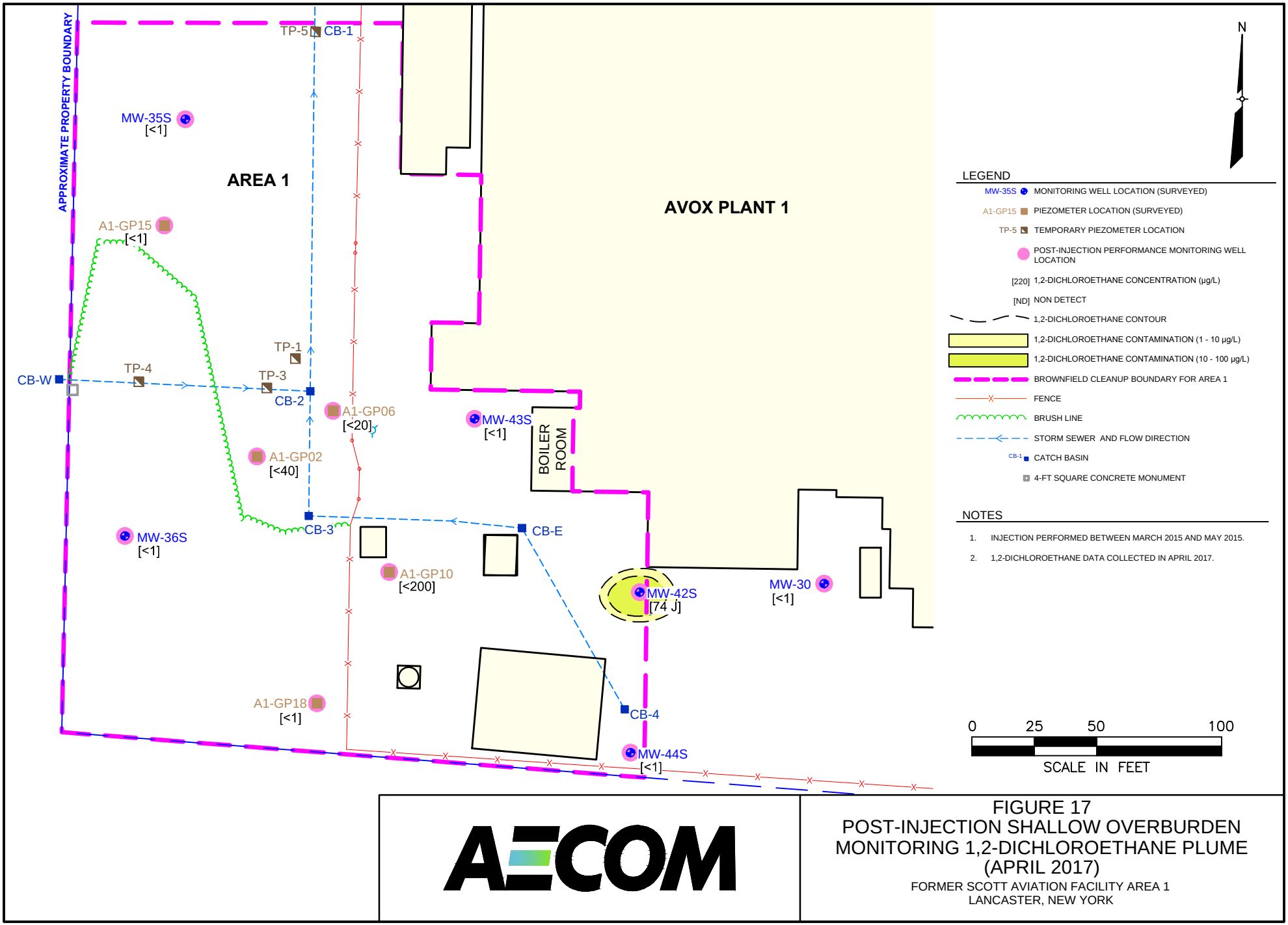

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FIGURE 17
POST-INJECTION SHALLOW OVERBURDEN MONITORING 1,2-DICHLOROETHANE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_159 1,2-DCA_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:24:01 PM, Splawnm

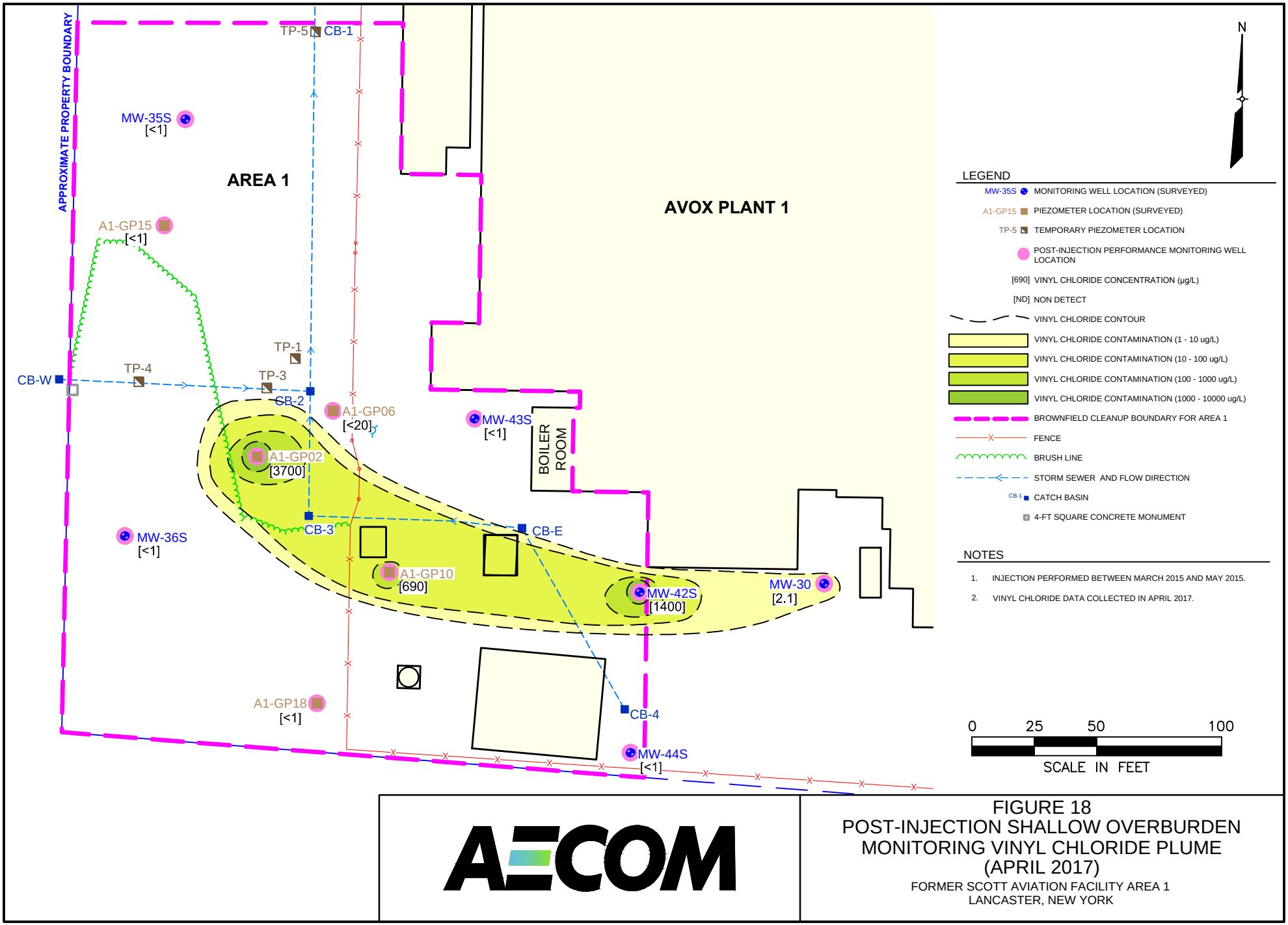

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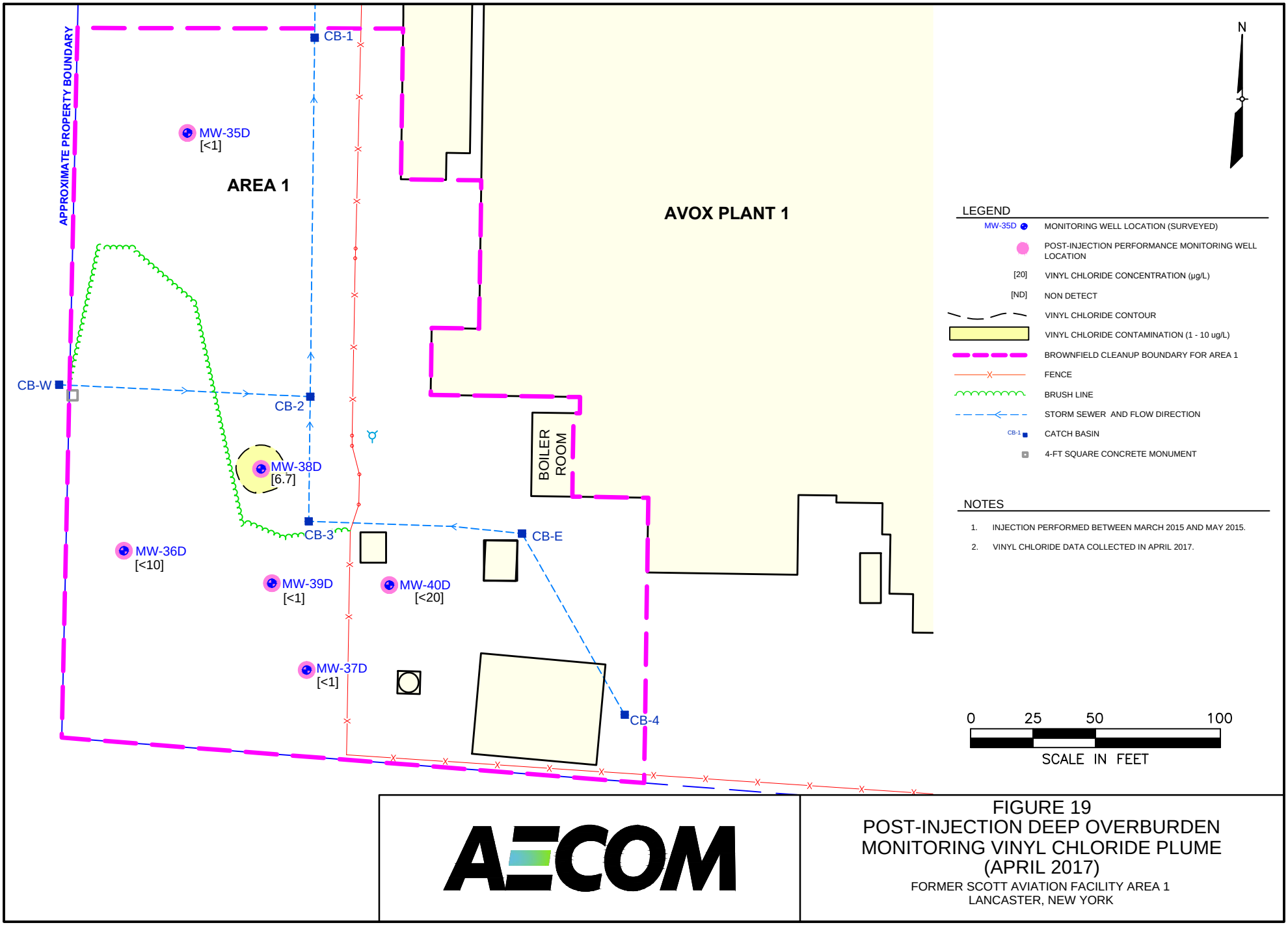
FIGURE 18
POST-INJECTION SHALLOW OVERBURDEN MONITORING VINYL CHLORIDE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_161 VC_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:24:29 PM, Splawnm



AECOM

FIGURE 19
POST-INJECTION DEEP OVERBURDEN MONITORING VINYL CHLORIDE PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_160 VC_Deep Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 12:24:55 PM, Splawnm

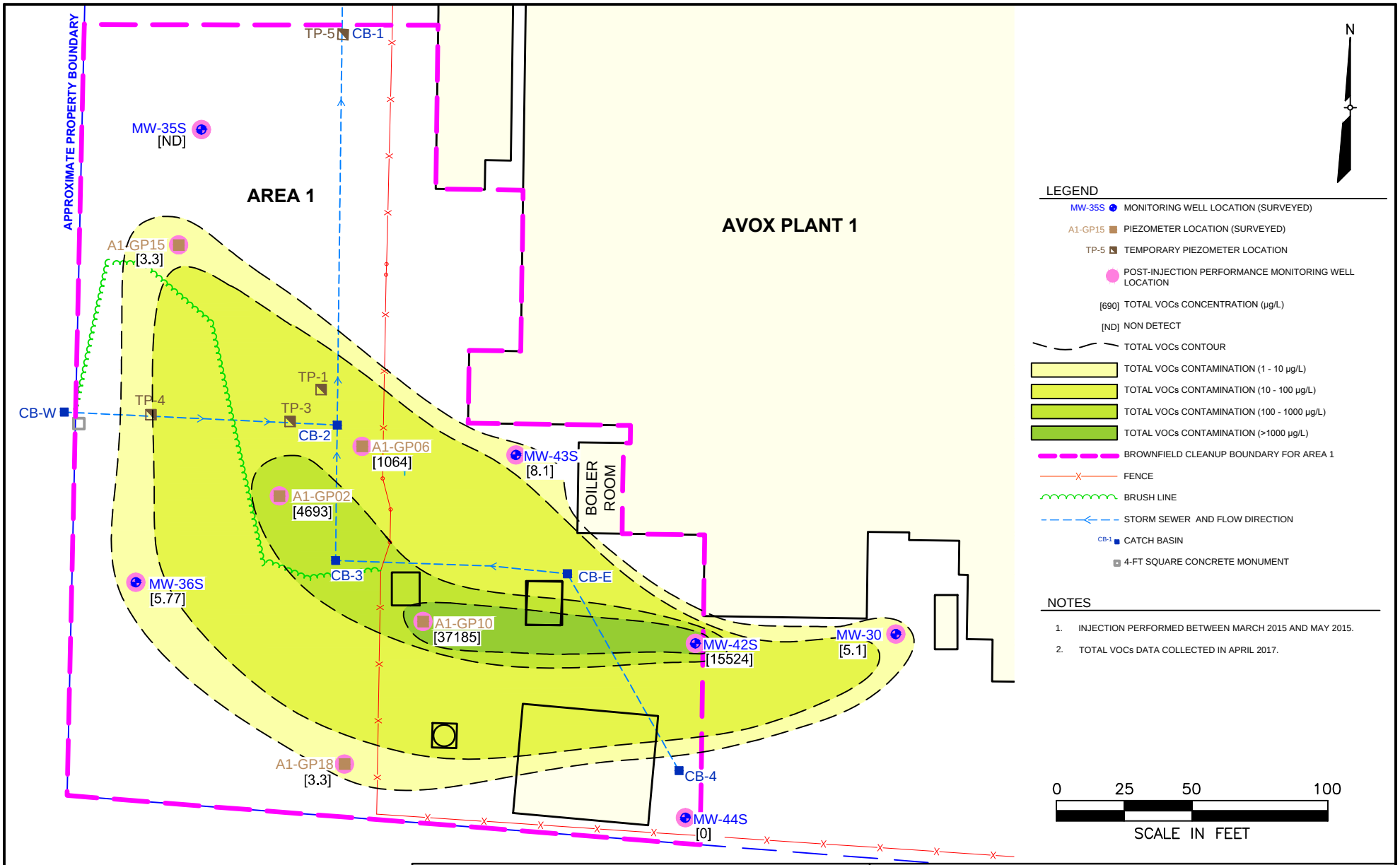


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FIGURE 20
POST-INJECTION SHALLOW OVERBURDEN MONITORING TOTAL VOCs PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_163 Total VOCs_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 2:16:42 PM, Splawnm

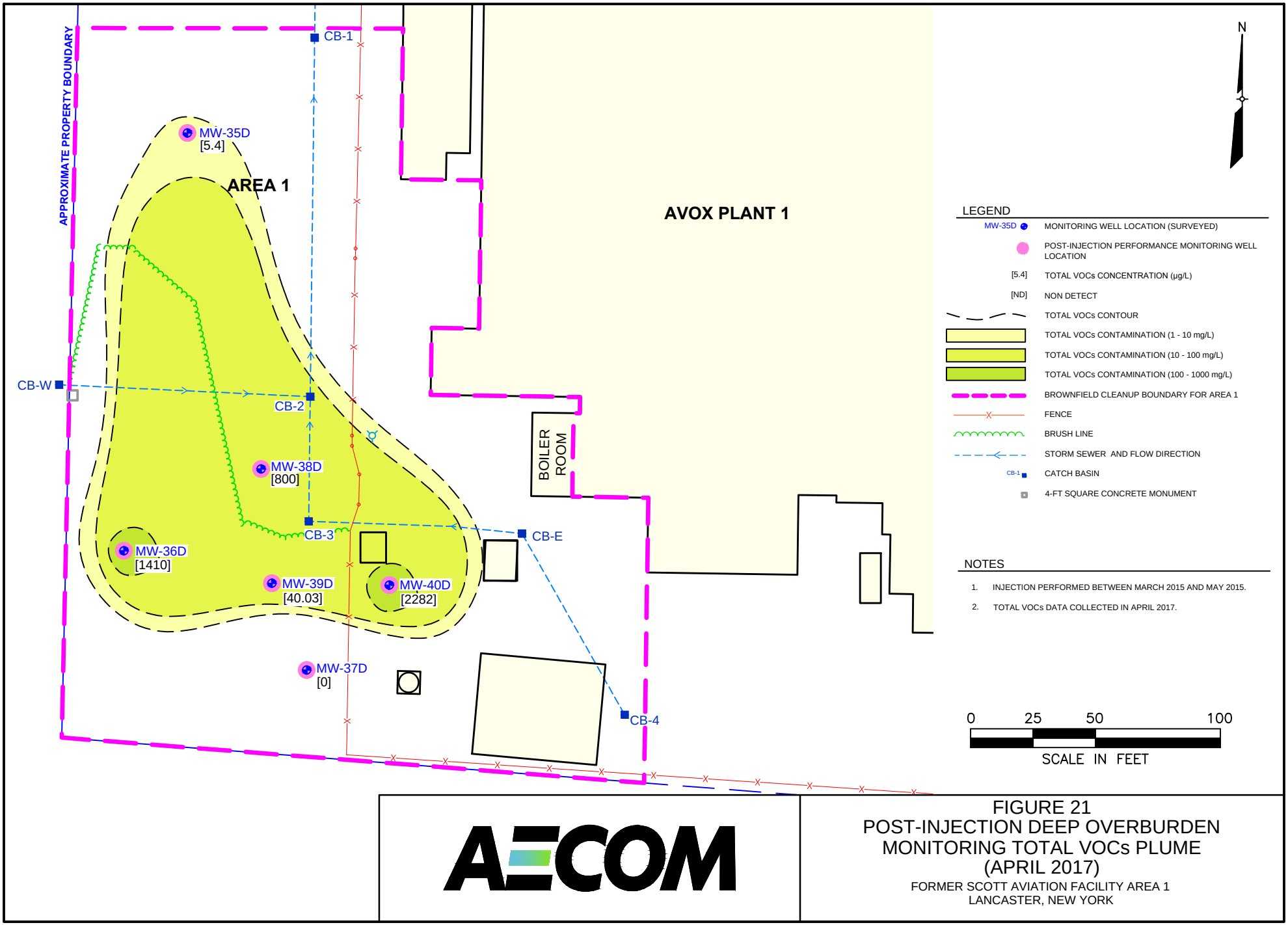

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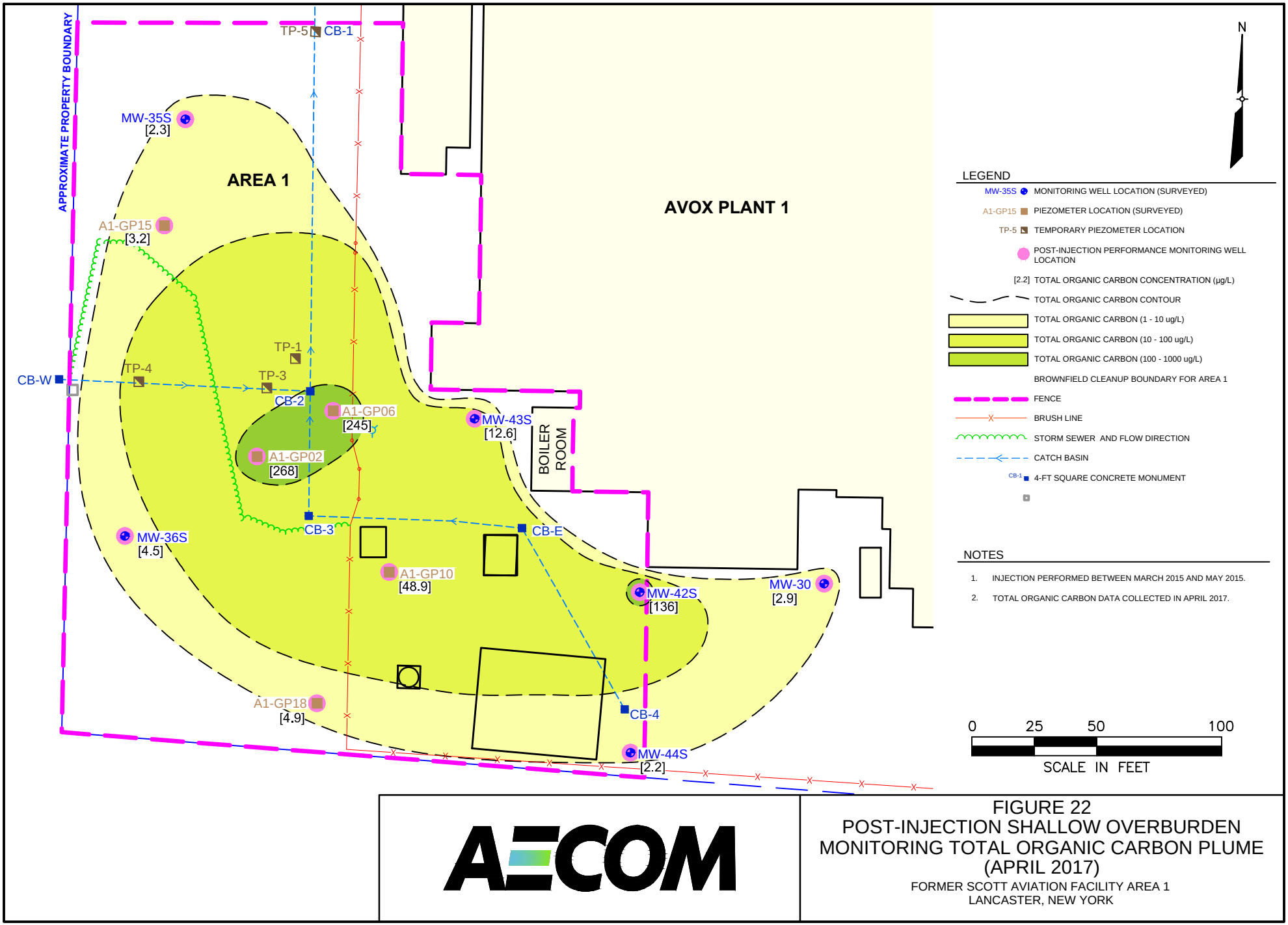
FIGURE 21
POST-INJECTION DEEP OVERBURDEN MONITORING TOTAL VOCs PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_162 Total VOCs_Deep Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 2:16:19 PM, Splawnm

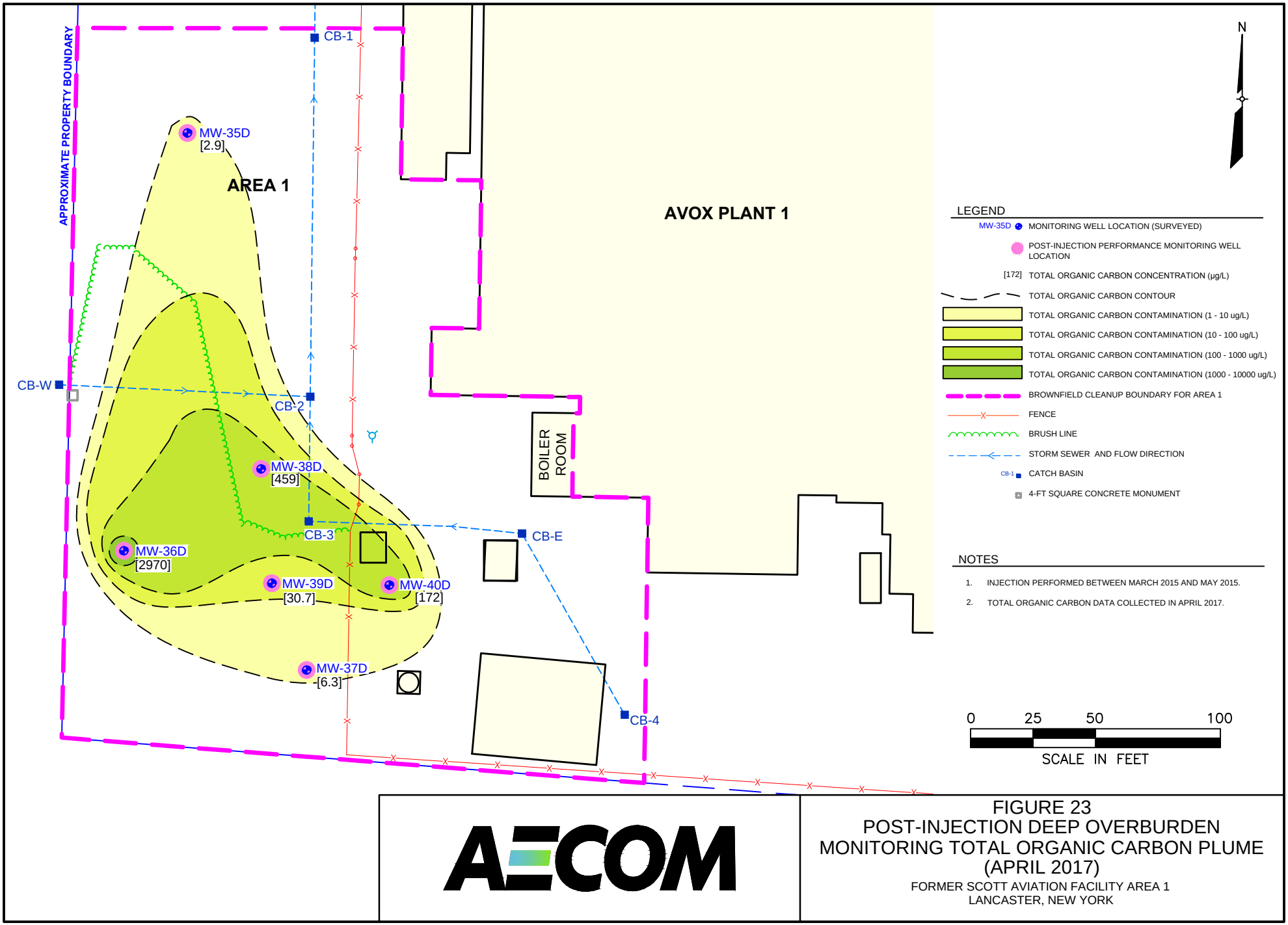


AECOM

FIGURE 22
POST-INJECTION SHALLOW OVERBURDEN MONITORING TOTAL ORGANIC CARBON PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_165 Total Organic Carbon_Shallow Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 4:20:54 PM, Splawnm



AECOM

FIGURE 23
POST-INJECTION DEEP OVERBURDEN MONITORING TOTAL ORGANIC CARBON PLUME (APRIL 2017)

FORMER SCOTT AVIATION FACILITY AREA 1
LANCASTER, NEW YORK

L:\work\60147012\CADD\60147012_164 Total Organic Carbon_Deep Overburden Post-Inj Performance MW Locs_Apr2017.dwg, 6/1/2017 4:21:09 PM, Splawnm

Tables

Table 1
Groundwater Elevation Data
Former Scott Aviation Facility Area 1 (BCP Site #C915233)
Lancaster, New York

Monitoring Point Identification	Top of Casing Elevation	April 7, 2017	
		Depth to Groundwater (feet from TOC)	Groundwater Elevation (feet AMSL)
Monitoring Wells			
MW-30[1]	689.69	12.35*	677.34
MW-35S	688.56	0.60	687.96
MW-35D	688.40	7.44	680.96
MW-36S	689.82	2.79	687.03
MW-36D	689.66	5.15	684.51
MW-37S	690.10	2.76	687.34
MW-37D	690.05	4.12	685.93
MW-38D	689.66	4.40	685.26
MW-39D	689.72	3.84	685.88
MW-40D	689.19	2.88	686.31
MW-41B	689.78	7.80	681.98
MW-42S	689.08	1.68	687.40
MW-43S	689.13	2.94	686.19
MW-44S	688.96	0.89	688.07
Piezometers			
A1-GP01-S[2]	689.96	NA	NA
A1-GP02-S	689.82	2.75	687.07
A1-GP03-S	690.70	3.60	687.10
A1-GP04-S	690.46	3.80	686.66
A1-GP05-S	690.38	3.38	687.00
A1-GP06-S	687.71	0.35	687.36
A1-GP07-S	690.47	3.34	687.13
A1-GP08-S	689.68	2.67	687.01
A1-GP09-S	689.36	2.30	687.06
A1-GP10-S	689.10	0.81	688.29
A1-GP11-S[2]	689.34	NA	NA
A1-GP12-S	689.50	1.24	688.26
A1-GP13-S	689.69	2.00	687.69
A1-GP14-S	689.43	0.64	688.79
A1-GP15-S	687.69	0.35	687.34
A1-GP16-S	689.86	2.73	687.13
A1-GP17-S	690.11	3.02	687.09
A1-GP18-S	690.37	3.72	686.65
Storm Sewer			
TP-5	690.53	7.63	682.90
TP-6	690.25	7.33	682.92
CB-1	690.70	6.19	684.51

Notes:
1 - Well is screened across both shallow and deep overburden units.
2 - Well was decommissioned
* - Well was under pressure
TOC - Top of Casing
AMSL - Above Mean Sea Level
NA - Not Available
S - well is screened in shallow overburden
D - well is screened in deep overburden
B - well is screened in bedrock

Table 2
Groundwater Monitoring Program
Former Scott Aviation Facility Area 1 (BCP Site #C915233)
Lancaster, New York

Location	Field Parameters	VOCs (8260B)	TOC (9060)	Iron Ferrous and Ferric (SM 3500 FE D)	Iron Ferric (SM 3500)	Nitrogen Nitrate (MCAWW 353.2)	Nitrogen Nitrate-Nitrate (MCAWW 353.2)	Nitrate (EPA 353.2)	Sulfate Turbidimetric (9038)	Manganese (6010C)	Sulfate (300.0)	Sulfide Total (SM 4500 S2 D)	Alkalinity (MCAWW 310.2)	Iron (200.7 Rev 4.4)	Carbon Dioxide (RSK-175)	COD (MCAWW 410.4)	BOD (SM 5210B)	Phosphorus (SM 4500 P E)	Nitrogen Ammonia (MCAWW 350.1)	Methane Ethane, Ethene (RSK-175)
Monitoring Well and Temporary Piezometer Groundwater Sampling																				
MW-30	✓	✓	✓																	
MW-35S	✓	✓	✓																	
MW-35D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW-36S	✓	✓	✓																	
MW-36D	✓	✓	✓																	
MW-37D	✓	✓	✓																	
MW-38D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW-39D	✓	✓	✓																	
MW-40D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW-42S	✓	✓	✓																	
MW-43S	✓	✓	✓																	
MW-44S	✓	✓	✓																	
A1-GP02-S	✓	✓	✓																	
A1-GP06-S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A1-GP10-S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A1-GP15-S	✓	✓	✓																	
A1-GP18-S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Storm Sewer Water Sampling																				
CB-1		✓																		
TP-5		✓																		
TP-6		✓																		

Notes:
QA/QC samples will also be collected per QAPP.
Field Parameters include pH, temperature, turbidity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and specific conductivity.
VOC - Volatile Organic Compound
TOC - Total Organic Carbon
COD - Chemical Oxygen Demand
BOD - Biochemical Oxygen Demand

Table 3
Groundwater VOC Results April 2017
Former Scott Aviation Facility Area 1 (BCP Site #C915233)
Lancaster, New York

Sample ID	Groundwater	CB-1		TP-05		TP-06		MW-30		MW-35S		MW-36S		MW-42S		MW-43S		MW-44S		A1-GP02-S	
Date Collected	RAO/ NYCRR	4/7/2017		4/7/2017		4/7/2017		4/12/2017		4/10/2017		4/12/2017		4/12/2017		4/11/2017		4/7/2017		4/11/2017	
Lab Sample ID	Objective	480-115915-1		480-115915-2		480-115915-3		480-116114-6		480-115915-7		480-116114-1		480-116114-5		480-115997-6		480-115915-12		480-115997-2	
Volatile Organic Compounds by Method 8260 (ug/L)																					
1,1,1-Trichloroethane*	5	**13**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**230**		1.0	U	1.0	U	40	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	**16**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**440**		1.0	U	1.0	U	40	U
1,1-Dichloroethane*	5	**5.1**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**1,700**		1.0	U	1.0	U	40	U
1,1-Dichloroethene*	5	**1.8**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**220**		1.0	U	1.0	U	40	U
1,2-Dichloroethane*	0.6	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**74**	**J**	1.0	U	1.0	U	40	U
2-Hexanone	50	5	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	1,000	U	5.0	U	5.0	U	200	U
2-Butanone (MEK)	50	10	U	10	U	10	U	10	U	10	U	10	U	2,000	U	10	U	10	U	400	U
Acetone	50	10	U	10	U	10	U	10	U	10	U	**4.0**	**J**	2,000	U	10	U	10	U	400	U
Carbon Disulfide	60	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.27**	**J**	200	U	1.0	U	1.0	U	40	U
Chloroethane	5	**2.1**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**10,000**		**8.1**		1.0	U	40	U
cis-1,2-Dichloroethene	5	**20**		1.0	U	**0.95**		**1.8**		1.0	U	**1.5**		**1,100**		1.0	U	1.0	U	**900**	
Ethylbenzene	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	40	U
Methylene chloride	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	40	U
Toluene	5	**1.6**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**360**		1.0	U	1.0	U	40	U
trans-1,2-Dichloroethene	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	**93**	
Trichloroethene*	5	**0.97**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	40	U
Vinyl chloride*	2	**1.8**		1.0	U	1.0	U	**2.1**		1.0	U	1.0	U	**1,400**		1.0	U	1.0	U	**3,700**	
Xylenes, Total	5	**1.8**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	40	U

Table 3
Groundwater VOC Results April 2017
Former Scott Aviation Facility Area 1 (BCP Site #C915233)
Lancaster, New York

Sample ID	A1-GP06-S		A1-GP10-S		A1-GP15-S		A1-GP18-S		MW-35D		MW-36D		MW-37D		MW-38D		MW-39D		MW-40D	
Date Collected	4/11/2017		4/10/2017		4/12/2017		4/10/2017		4/10/2017		4/12/2017		4/11/2017		4/12/2017		4/11/2017		4/10/2017	
Lab Sample ID	480-115997-3		480-115915-8		480-116114-3		480-115915-10		480-115915-9		480-116114-2		480-115997-5		480-116114-4		480-115997-4		480-115915-11	
Volatile Organic Compounds by Metho																				
1,1,1-Trichloroethane*	**34**		**240**		1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	**43**	
1,1,2-Trichloro-1,2,2-trifluoroethane	52	U	110	J	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
1,1-Dichloroethane*	**210**		**4,100**		1.0	U	1.0	U	1.0	U	10	U	1.0	U	**2.1**	**J**	1.0	U	20	U
1,1-Dichloroethene*	**6.2**	**J**	**45**	**J**	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
1,2-Dichloroethane*	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
2-Hexanone	100	U	1,000	U	5.0	U	5.0	U	5.0	U	50	U	5.0	U	20	U	**1.3**	**J**	100	U
2-Butanone (MEK)	**32**	**J**	2,000	U	10	U	10	U	10	U	**930**		10	U	**660**		**28**		200	U
Acetone	200	U	2,000	U	**3.3**	**J**	**3.3**	**J**	**5.4**	**J**	**480**		10	U	**86**		**10**		200	U
Carbon Disulfide	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
Chloroethane	**730**		**32,000**		1.0	U	1.0	U	1.0	U	10	U	1.0	U	**17**		1.0	U	**2,200**	
cis-1,2-Dichloroethene	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
Ethylbenzene	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	**5.7**		1.0	U	20	U
Methylene chloride	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	2.0	J	1.0	U	**39**	**J**
Toluene	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	**7.5**		**0.73**	**J**	20	U
trans-1,2-Dichloroethene	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
Trichloroethene*	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	4.0	U	1.0	U	20	U
Vinyl chloride*	20	U	**690**		1.0	U	1.0	U	1.0	U	10	U	1.0	U	**6.7**		1.0	U	20	U
Xylenes, Total	20	U	200	U	1.0	U	1.0	U	1.0	U	10	U	1.0	U	**13**		1.0	U	20	U

Notes:
Bold font indicates the analyte was detected.
Bold font and bold outline indicates the standard or guidance value was exceeded.
* Site-specific Contaminants of Concern (December 2015)
Site-specific Contaminants of Concern (1,1,2-Trichloroethane and Tetrachloroethene) were not detected above the reporting limit.
J - Analyte detected at a level less than the reporting limit and greater than or equal to the method detection limit. Concentrations within this range are estimated.
U - Not detected at or above reporting limit.

Table 4
Monitoring Well, Piezometer, and Catch Basin Specifications
Former Scott Aviation Facility Area 1 (BCP Site #C915233)
Lancaster, New York

Well ID	Well Location	Coordinates (longitude/latitude)	Well Diameter (inches)	Elevation (above mean sea level)			
				Casing	Surface	Screen Top	Screen Bottom
A1-GP02-S	Plume	42.9047° N, 78.6593° W	1	689.82	687.3	682.3	672.3
A1-GP03-S	Plume	42.9046° N, 78.6592° W	1	690.70	688.8	683.8	673.8
A1-GP04-S	Plume	42.9046° N, 78.6594° W	1	690.46	687.7	682.7	672.7
A1-GP05-S	Plume	42.9046° N, 78.6593° W	1	690.38	687.6	682.6	672.6
A1-GP06-S	Plume	42.9047° N, 78.6592° W	1	687.71	687.8	682.8	672.8
A1-GP07-S	Plume	42.9047° N, 78.6593° W	1	690.47	687.5	682.5	672.5
A1-GP08-S	Plume	42.9047° N, 78.6594° W	1	689.68	686.5	681.5	671.5
A1-GP09-S	Downgradient	42.9045° N, 78.6594° W	1	689.36	686.8	681.8	671.8
A1-GP10-S	Plume	42.9045° N, 78.6591° W	1	689.10	689.2	684.2	674.2
A1-GP12-S	Plume	42.9047° N, 78.6591° W	1	689.5	689.4	684.4	674.4
A1-GP13-S	Plume	42.9045° N, 78.6589° W	1	689.69	689.8	684.8	674.8
A1-GP14-S	Downgradient	42.9049° N, 78.6591° W	1	689.43	689.7	684.7	674.7
A1-GP15-S	Downgradient	42.9049° N, 78.6595° W	1	687.69	688.0	683.0	673.0
A1-GP16-S	Downgradient	42.9046° N, 78.6596° W	1	689.86	686.6	681.6	671.6
A1-GP17-S	Downgradient	42.9045° N, 78.6596° W	1	690.11	687.0	682.0	672.0
A1-GP18-S	Upgradient	42.9044° N, 78.6592° W	1	690.37	687.5	682.5	672.5
MW-30	Upgradient	42.9045° N, 78.6585° W	2	689.69	689.8	679.8	669.8
MW-35D	Downgradient	42.9050° N, 78.6594° W	2	688.4	688.9	667.9	662.9
MW-35S	Downgradient	42.9050° N, 78.6594° W	2	688.56	689.1	684.1	674.1
MW-36D	Plume	42.9046° N, 78.6595° W	2	689.66	687.1	671.1	666.1
MW-36S	Upgradient	42.9046° N, 78.6595° W	2	689.82	687.1	683.1	672.1
MW-37D	Upgradient	42.9044° N, 78.6593° W	2	690.05	687.6	672.6	667.6
MW-37S	Plume	42.9044° N, 78.6593° W	2	690.1	687.4	682.9	672.9
MW-38D	Plume	42.9047° N, 78.6593° W	2	689.66	687.5	671.5	666.5
MW-39D	Plume	42.9045° N, 78.6593° W	2	689.72	687.4	672.4	667.4
MW-40D	Plume	42.9045° N, 78.6591° W	2	689.19	689.5	671.7	666.7
MW-41B	Bedrock	42.9046° N, 78.6592° W	2	689.78	687.8	663.0	653.0
MW-42S	Plume	42.9045° N, 78.6588° W	2	689.08	689.7	684.7	674.7
MW-43S	Plume	42.9047° N, 78.6590° W	2	689.14	689.6	684.6	674.6
MW-44S	Upgradient	42.9043° N, 78.6588° W	2	688.98	689.4	684.4	674.4
CB-1	Catch Basin	42.9044° N, 78.6600° W	na	na	689.53	na	683.19[(1)]
TP-5	Stormsewer	42.9051° N, 78.6592° W	1	690.53	689.53	685.53	682.53
TP-6	Stormsewer	42.9051° N, 78.6592° W	1	690.25	690.45	686.45	681.45

1. Bottom elevation of catch basin.

Appendix A

Former Scott Aviation Area 1 Pre-Injection and Post-Injection Groundwater Quality Data

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
CB-1	Monitoring event	BL1	6/1/2011	-1434	6.34	NS	689.5	NS							NS
	Monitoring event	BL2	6/16/2011	-1419	6.34	NS	689.5	NS							NS
	Monitoring event	BL3	10/7/2011	-1306	6.34	NS	689.5	NS							NS
	Monitoring event	P1	6/12/2015	38	6.34	NS	689.5	NS	NS (Grab Sample)						NS
	Monitoring event	P2	1/6/2016	246	6.34	NS	689.5	NS							NS
	Monitoring event	P3	4/8/2016	339	6.34	7.64	689.5	681.9							NS
	Monitoring event	P4	7/11/2016	433	6.34	6.31	689.5	683.2							NS
	Monitoring event	P5	10/13/2016	527	6.34	6.25	689.5	683.3	8.04	7.62	122.3	0.296	5.98	14.97	NS
	Monitoring event	P6	1/20/2017	626	6.34	NS	689.5	NS							NS
	Monitoring event	P7	4/7/2017	703	6.34	6.19	689.5	683.3	7.71	NA	25.9	0.305	17.9	NA	NS
	Monitoring event	P8	7/1/2017	788				0							
	Monitoring event	P9	10/1/2017	880				0							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	420	400 J	1.6	53	41	ND	ND	ND	ND	61	ND	ND	2.8	ND	ND	140	ND	ND	ND	ND	ND	0.5 J	1.9	1.8	59	8.4	1 J
BL2	120	220	0.87 J	18	14	ND	ND	ND	ND	390 J	ND	ND	0.6 J	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	1.5	18	1.4	ND
BL3	170	260	1.4	26	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	52	ND	ND	ND	ND	ND	0.73 J	ND	ND	22	ND	ND
P1	27	19	ND	18	3.7	ND	ND	36	ND	340	ND	0.46 J	ND	0.55 J	ND	44	ND	ND	0.41 J	ND	ND	ND	3.2	ND	1.5	1.6	7.4
P2	45	140	0.29 J	42	8.2	0.28 J	ND	ND	ND	73	ND	ND	37	ND	ND	100	ND	0.75	0.18 J	ND	ND	ND	6.2	2.2	12	13	5.3
P3	10	32	ND	4.4	3.2 J	ND	ND	ND	ND	110	ND	ND	2.5 J	ND	ND	18	ND	ND	ND	6.9	ND	ND	ND	ND	2.9 J	ND	ND
P4	ND	1.6	ND	0.60 J	ND	ND	ND	ND	ND	4.7 J	ND	ND	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	3.4	3.5	ND	3.2	0.81 J	ND	ND	ND	ND	ND	ND	ND	2.6	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.92	ND
P6	21	45	ND	11	5.0	ND	ND	ND	ND	ND	ND	ND	5.6	ND	ND	33	ND	ND	ND	ND	ND	ND	1.4	ND	3.2	4.1	2.0
P7	13	16	ND	5.1	1.8	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	20	ND	ND	ND	ND	ND	ND	1.6	ND	0.97 J	1.8	1.8 J
P8																											
P9																											

Dissolved Gasses (ug/L): Carbon Dioxide	Ethane	Ethene	Methane	Wet Chemistry (mg/L): Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Total Depth (feet)	Water Level Measurement (ft. ATOC)	Top of Casing Elevation (ft. AMSL)	Head Elevation (ft. AMSL)	pH (SU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Specific Conductance (mS/cm)	Turbidity (NTUs)	Temperature (°C)	Carbon, Total Organic (mg/L)
					Well				Field Parameters						
TP-05	Monitoring event	BL1	6/1/2011	-1434	7.0	NS	690.5	NS	NS (Grab Sample)						NS
TP-05	Monitoring event	P1	7/28/2015	84	7.0	7.75	690.5	682.8	7.07	3.62	-66.7	1.153	9.43	19.51	NS
TP-05	Monitoring event	P2	1/6/2016	246	7.0	NS	690.5	NS							NS
TP-05	Monitoring event	P3	4/8/2016	339	7.0	7.64	690.5	682.9	NS (Grab Sample)						NS
TP-05	Monitoring event	P4	7/11/2016	433	7.0	7.79	690.5	682.7							NS
TP-05	Monitoring event	P5	10/13/2016	527	7.0	7.56	690.5	683	7.48	5.94	116	0.549	11.4	15.35	NS
TP-05	Monitoring event	P6	1/20/2017	626	7.0	NS	690.5	NS							NS
TP-05	Monitoring event	P7	4/7/2017	703	7.0	7.63	690.5	682.9	7.3	NA	26.6	1.197	70.1	NA	NS
TP-05	Monitoring event	P8	7/1/2017	788				0							
TP-05	Monitoring event	P9	10/1/2017	880				0							

VOCs (ug/L)

Well ID	Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
TP-05	BL1	83	60 J	ND	12	7.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	8.8	1.6	ND
TP-05	P1	2.5	23	ND	29	1.1	ND	ND	22	ND	28	ND	ND	2.3	ND	ND	17	ND	ND	ND	0.48 J	ND	ND	4.4	1.2	1.9	9.9	4.3
TP-05	P2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.54 J	ND	ND
TP-05	P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP-05	P4	ND	2.7	ND	2.2	ND	ND	ND	ND	ND	3.3 J	ND	ND	0.49 J	ND	ND	1.4	2.1	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND
TP-05	P5	0.82 J	ND	ND	3.2 J	ND	ND	ND	ND	ND	ND	ND	ND	0.92 J	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	0.87	ND	ND
TP-05	P6	ND	0.54 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP-05	P7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP-05	P8																											
TP-05	P9																											

Dissolved Gasses (ug/L); Wet Chemistry (mg/L); Q Potential (DNA) (cells / mL)

Well ID	Event	Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	Functional Genes: BAV1 VC R-Dase (1)	Functional Genes: VC R-Dase
TP-05	BL1–P9	Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Specific Conductance (mS/cm)	Turbidity (NTUs)	Temperature (°C)	Carbon, Total Organic (mg/L)
TP-06	Monitoring event	P1	6/12/2015	38	9.0	NS	690.3	NS	NS (Grab Sample)						NS
	Monitoring event	P2	7/28/2015	84	9.0	7.75	690.3	682.5	7.13	1.54	54.5	3.082	2.82	19.35	NS
	Monitoring event	P3	1/6/2016	246	9.0	NS	690.3	NS							NS
	Monitoring event	P4	4/8/2016	339	9.0	7.4	690.3	682.9	NS (Grab Sample)						NS
	Monitoring event	P5	7/11/2016	433	9.0	7.52	690.3	682.7							NS
	Monitoring event	P6	10/13/2016	527	8.6	7.43	690.3	682.8	7.34	4.61	175.9	2.302	24.2	16.71	NS
	Monitoring event	P7	1/20/2017	626	9.0	NS	690.3	NS							NS
	Monitoring event	P8	4/7/2017	703	9.0	7.33	690.3	682.9	9.51	NA	18.4	1.525	150	NA	NS
	Monitoring event	P9	7/1/2017	788				0							
	Monitoring event	P10	10/1/2017	880				0							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform
P1	1.8	0.31 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P9														
P10														

Event	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
P1	ND	3.1	ND	ND	ND	ND	ND	ND	ND	ND	0.49 J	ND	ND
P2	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	0.83 J	ND	ND
P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7	ND	1.0	ND	ND	0.21 J	ND	ND	ND	ND	ND	ND	ND	ND
P8	ND	0.95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P9													
P10													

Dissolved Gasses (ug/L)	Wet Chemistry (mg/L)	Q Potential (DNA) (cells / mL)
Carbon Dioxide, Ethane, Ethene, Methane	Dissolved Oxygen, Nitrate, Manganese, Ferric iron, Sulfate, Sulfide, Nitrite, Phosphorous, Ammonia, COD, BOD, Total Alkalinity, Ferrous Iron, Iron, Acetic Acid, Formic Acid, Lactic Acid, n-Butyric Acid, Propionic Acid, Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1); Functional Genes: TCE R-Dase (1), BAV1 VC R-Dase (1), VC R-Dase
Not Sampled For These Parameters		

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
A1-GP02-S	Monitoring event	BL1	6/22/2010	-1778	15	4.12	689.82	685.7	6.93	7.31	47.1	1.117	46.5	18.4	NS
A1-GP02-S	Monitoring event	BL2	8/4/2010	-1735	15	4.9	689.82	684.92	6.82	4.37	-31.9	1.17	454	21.27	NS
A1-GP02-S	Monitoring event	BL3	3/10/2015	-56	15	3.95	689.8	685.9	7.24	6.95	-0.9	0.85	52.7	6.86	3.3
A1-GP02-S	Monitoring event	P1	7/28/2015	84	15	4.55	689.8	685.3	5.75	0.89	48.2	5.212	25	16.89	3,700
A1-GP02-S	Monitoring event	P2	1/7/2016	247	15	4.1	689.8	685.7	6.06	3.51	21.8	5.662	53.2	9.23	NS
A1-GP02-S	Monitoring event	P3	4/8/2016	339	15	2.64	689.8	687.2	6.24	2.24	-5.3	2.794	69.3	6.85	1,280
A1-GP02-S	Monitoring event	P4	7/11/2016	433	15	6.04	689.8	683.8	6.35	3.9	-40.7	4.406	43.7	18.39	1,570
A1-GP02-S	Monitoring event	P5	10/10/2016	524	15	6.6	689.8	683.2	6.71	6.59	-61.4	3.404	43.5	18.42	1,180
A1-GP02-S	Monitoring event	P6	1/23/2017	629	15	3.15	689.8	686.7	6.68	3.1	-61.3	1.284	20.3	8.27	261
A1-GP02-S	Monitoring event	P7	4/11/2017	707	15	2.75	689.8	687.1	6.52	4.88	-44.7	1.413	125	10.7	268
A1-GP02-S	Monitoring event	P8	7/1/2017	788			689.8	689.8							
A1-GP02-S	Monitoring event	P9	10/1/2017	880			689.8	689.8							

VOCs (ug/L)

Well ID	Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform
A1-GP02-S	BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	BL2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	BL3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P1	ND	ND	ND	ND	34 J	ND	ND	ND	ND	360 J	ND	ND	ND	ND
A1-GP02-S	P2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A1-GP02-S	P8														
A1-GP02-S	P9														

Well ID	Event	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
A1-GP02-S	BL1	ND	6,400	ND	ND	ND	ND	ND	ND	ND	94 J	11,000	ND	ND
A1-GP02-S	BL2	ND	10,000	ND	ND	ND	ND	ND	ND	ND	190 J	20,000	ND	ND
A1-GP02-S	BL3	ND	3,300	ND	ND	ND	ND	ND	ND	ND	ND	5,400	ND	ND
A1-GP02-S	P1	ND	23,000	ND	ND	ND	92	ND	ND	ND	120	8,000	140	ND
A1-GP02-S	P2	ND	29,000	ND	ND	ND	ND	ND	ND	ND	ND	330 J	770	ND
A1-GP02-S	P3	ND	22,000	ND	ND	ND	250 J	ND	ND	ND	ND	ND	2,400	ND
A1-GP02-S	P4	ND	32,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	ND
A1-GP02-S	P5	ND	6,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	13,000	ND
A1-GP02-S	P6	ND	810	ND	ND	ND	ND	ND	ND	ND	50	ND	1,700	ND
A1-GP02-S	P7	ND	900	ND	ND	ND	ND	ND	ND	ND	93	ND	3,700	ND
A1-GP02-S	P8													
A1-GP02-S	P9													

Well ID	Dissolved Gasses (ug/L): Carbon Dioxide	Ethane	Ethene	Methane	Wet Chemistry (mg/L): Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
A1-GP02-S	Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Well				Field Parameters						
					Total Depth (feet)	Water Level Measurement (ft. ATOC)	Top of Casing Elevation (ft. AMSL)	Head Elevation (ft. AMSL)	pH (SU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Specific Conductance (mS/cm)	Turbidity (NTUs)	Temperature (°C)	Carbon, Total Organic (mg/L)
A1-GP06-S	Monitoring event	BL1	6/21/2010	-1779	15	3.4	687.7	684.3	6.88	3.45	83.7	0.752	64.1	16.99	NS
A1-GP06-S	Monitoring event	BL2	8/4/2010	-1735	15	3.24	687.7	684.5	7.1	4.32	13.2	0.793	4.1	19.3	NS
A1-GP06-S	Monitoring event	BL3	11/5/2014	-181	15	2.15	687.7	685.6	7.19	1.0	-57.4	0.759	NS	12.74	NS
A1-GP06-S	Monitoring event	BL4	3/11/2015	-55	15	2.0	687.7	685.7	5.8	9.8	257.3	0.616	8.54	4.86	5.5
A1-GP06-S	Monitoring event	P1	7/27/2015	83	15	2.75	687.7	685	6.8	0.63	-106.2	3.365	11.8	15.83	1,420
A1-GP06-S	Monitoring event	P2	1/7/2016	247	15	2.1	687.7	685.6	7.18	0.51	-115.7	2.024	17.0	10.28	415
A1-GP06-S	Monitoring event	P3	4/8/2016	339	15	1.76	687.7	686	7.11	0.7	-93.5	1.126	33.2	6.42	219
A1-GP06-S	Monitoring event	P4	7/12/2016	434	15	3.23	687.71	684.48	7.22	1.18	-137.2	1.964	47.9	17.81	588
A1-GP06-S	Monitoring event	P5	10/10/2016	524	15	3.55	687.71	684.16	7.28	1.92	-83.5	2.066	11.4	17.64	398
A1-GP06-S	Monitoring event	P6	1/24/2017	630	15	1.67	687.71	686.04	7.96	0.47	-106	1.177	19.5	10.65	47.7
A1-GP06-S	Monitoring event	P7	4/11/2017	707	15	0.35	687.7	687.4	7.17	0.58	-90.7	0.945	33	11.6	245
A1-GP06-S	Monitoring event	P6	7/1/2017	788			687.7	687.7							
A1-GP06-S	Monitoring event	P7	10/1/2017	880			687.7	687.7							

Event		VOCs (ug/L)																										
		1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
Monitoring event	BL1	620	660	ND	890	63 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32 J	ND	ND	ND	ND	ND	ND	ND	ND	46 J	ND	ND
Monitoring event	BL2	1,700	1,900	16 J	3,200	270	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130	33 J	ND	ND	ND	ND	ND	ND	ND	200	20 J	ND
Monitoring event	BL3	Not Sampled For These Parameters																										
Monitoring event	BL4	ND	7.4	ND	21	0.89 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 B	ND	ND	ND	ND	0.81 J	ND	ND
Monitoring event	P1	110	300	4.1	3,300	60	3.1	ND	140	ND	50	ND	0.34 J	36	0.68 J	ND	270	190	ND	ND	ND	16	ND	15	3.2	18	16	ND
Monitoring event	P2	ND	ND	ND	340	ND	ND	ND	95 J	ND	41 J	ND	ND	310	ND	ND	25	ND	ND	ND	5.5 J	ND	ND	ND	ND	ND	16	ND
Monitoring event	P3	73	63	ND	450	7.8 J	ND	ND	28 J	ND	ND	ND	ND	790	ND	ND	ND	ND	ND	ND	5.1 J	ND	ND	6.1 J	ND	5.4 J	33	ND
Monitoring event	P4	35	110	ND	680	ND	ND	ND	69 J	ND	31 J	ND	ND	1,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND
Monitoring event	P5	ND	26	ND	270	ND	ND	ND	ND	ND	ND	ND	ND	670	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring event	P6	24	31	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	1,300	ND	ND	ND	ND	ND	ND	16 J	ND	ND	ND	ND	ND	29	ND
Monitoring event	P7	34	52	ND	210	6.2 J	ND	ND	32 J	ND	ND	ND	ND	730	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring event	P6																											
Monitoring event	P7																											

Event		Dissolved Gasses (ug/L)				Wet Chemistry (mg/L)																				Q Potential (DNA) (cells / mL)			
																										Dechlorinating Bacteria	Functional Genes		
		Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dehalococcoides spp (1)	TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
Monitoring event	BL1	Not Sampled For These Parameters																											
Monitoring event	BL2																												
Monitoring event	BL3	9,500	NS	NS	44	1.0	ND	0.047	0.27	22	NS	ND	ND	0.23	19.6	ND	376	ND	0.27	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
Monitoring event	BL4	Not Sampled For These Parameters																											
Monitoring event	P1	10,000	ND	ND	660	0.63	ND	1.6 B	45.5	ND	NS	ND	0.42	0.19	3220	3410	2430	27.6	73.1	1730	14.4	ND	137	836	ND	Not Sampled For These Parameters			
Monitoring event	P2	4,000	ND	ND	2,900	ND	0.029 J	0.37	21	22.3	ND	ND	0.54	0.023	443	942	787 B	ND	21	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
Monitoring event	P3	6,000	ND	ND	2,200	ND	ND	0.46	15.8	9.2	ND	ND	0.059	0.019 J	453	552 b	701	ND	15.8	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
Monitoring event	P4	49,000	ND	ND	410	ND	ND	0.25 B	7.4	ND	ND	ND	0.16	0.13	2030 B	>1295.73 H b	1360	1.2 H F	8.6	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
Monitoring event	P5	36,000	ND	ND	2,600	ND	ND	0.23 B	4.9	ND	0.80 J	0.020 J	0.14	0.16	1,750	ND	1,080	ND	4.9	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
Monitoring event	P6	44,000	ND	ND	1,800	ND	0.024 J	0.23	13.6	33.9	ND	ND	0.060 F1	ND	211	744 H b	456	0.080 J H F	13.7	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
Monitoring event	P7	23,000	ND	ND	2,500	ND	ND	0.12	2.9	12	ND	ND	0.05	0.065	574	418 Hb	697	ND	ND	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
Monitoring event	P6																									Not Sampled For These Parameters			
Monitoring event	P7																									Not Sampled For These Parameters			

Well ID	Event / Description		Date	Elapsed Time (Days)	Total Depth (feet)	Water Level Measurement (ft. ATOC)	Top of Casing Elevation (ft. AMSL)	Head Elevation (ft. AMSL)	pH (SU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Specific Conductance (mS/cm)	Turbidity (NTUs)	Temperature (°C)	Carbon, Total Organic (mg/L)
					Well				Field Parameters						
A1-GP10-S	Monitoring event	BL1	6/21/2010	-1779	15	2.7	689.1	686.4	6.57	5.08	1.9	1.171	473	17.45	NS
A1-GP10-S	Monitoring event	BL2	8/3/2010	-1736	15	3.8	689.1	685.3	6.64	2.61	-58.6	1.036	115.7	20.32	NS
A1-GP10-S	Monitoring event	BL3	11/5/2014	-181	15	4.3	689.1	684.8	6.9	2.15	-68.2	1.007	N/A	12.65	NS
A1-GP10-S	Monitoring event	BL4	3/11/2015	-55	15	1.8	689.1	687.3	6.87	1.84	-49.8	1.096	32	7.56	2.7
A1-GP10-S	Monitoring event	P1	6/12/2015	38	NS (Grab Sample)										NS
A1-GP10-S	Monitoring event	P2	7/27/2015	83	15	2.29	689.1	686.8	6.33	4.31	13.4	3.454	22.6	15.9	1570
A1-GP10-S	Monitoring event	P3	1/7/2016	247	15	1.85	689.1	687.3	7.12	5.28	-50.8	1.33	22.1	9.97	37.7 B
A1-GP10-S	Monitoring event	P4	4/8/2016	339	15	1.05	689.1	688.05	7.01	3.54	-42.2	0.979	20.0	7.43	35
A1-GP10-S	Monitoring event	P5	7/11/2016	433	15	3.65	689.1	685.45	6.75	7.22	-33.6	1.791	22.6	19.36	303
A1-GP10-S	Monitoring event	P6	10/7/2016	521	15	2.1	689.1	687	6.93	5.01	160	1.556	7.12	17.47	96.7
A1-GP10-S	Monitoring event	P7	1/23/2017	629	15	1.75	689.1	687.35	7.82	13.49	-62.2	0.493	10	11.09	39.9
A1-GP10-S	Monitoring event	P8	4/10/2017	706	15	0.81	689.1	688.29	7.01	6.12	-26.1	0.653	6.2	14.5	48.9
A1-GP10-S	Monitoring event	P9	7/1/2017	788			689	689							
A1-GP10-S	Monitoring event	P10	10/1/2017	880			689	689							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	55,000	1400 J	84	43,000	1,300 J	77	ND	96	2.6 J	ND	ND	0.87 J	ND	7.3	0.46 J	ND	1.2 J	2 J	ND	17	ND	1.2 J	8	1.3 J	92	41	16
BL2	84,000	1,900 J	ND	48,000	2,000 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL3	Not Sampled For These Parameters																										
BL4	1,500	85	1.2 J	440	65	1.6 J	ND	ND	ND	ND	ND	ND	3	ND	ND	7.4	ND	ND	ND	4.2 J	ND	ND	ND	ND	6.6	ND	ND
P1	28,000	790	ND	15,000	1,000	40 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P2	12,000	430	ND	2,900	1,600	9.6 J	ND	380	ND	950	ND	ND	ND	16 J	ND	45	ND	ND	ND	20 J	ND	ND	ND	ND	36	ND	ND
P3	4,900	290	ND	4,300	470	ND	ND	ND	ND	ND	ND	ND	520	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	1,700	180	ND	4,800	220	ND	ND	ND	ND	ND	ND	ND	640	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	6,600	140	ND	29,000	500	72	ND	ND	ND	ND	ND	ND	6,700	ND	ND	270	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	360	ND	ND	7,200	190 J	47 J	ND	ND	ND	ND	ND	ND	12,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7	ND	ND	ND	580	ND	ND	ND	ND	ND	ND	ND	ND	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P8	240	110 J	ND	4,100	45 J	ND	ND	ND	ND	ND	ND	ND	32,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	690	ND
P9																											
P10																											

Event	Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dehalococcoides spp (1)	TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
	Dissolved Gasses (ug/L)				Wet Chemistry (mg/L)																				Q Potential (DNA) (cells / mL): Dechlorinating Bacteria	Functional Genes		
BL1	Not Sampled For These Parameters																											
BL2	Not Sampled For These Parameters																											
BL3	9,800	NS	NS	91	2.15	ND	0.042	0.63	8.3	NS	ND	ND	0.033	27.4	3	388	0.17	0.8	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
BL4	Not Sampled For These Parameters																											
P1	Not Sampled For These Parameters																											
P2	39,000	ND	ND	91	4.31	ND	22	2.3	ND	ND	ND	0.044	0.039	4,400	>3,531.	2650	2.3	4.6	1270	15.2	ND	131	1,510	ND	Not Sampled For These Parameters			
P3	6,600	ND	ND	2,000	ND	ND	2.4	6.6	5.2 J	ND	ND	0.14	0.082	258	154	734 B	ND	6.6	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
P4	11,000	ND	ND	860	ND	ND	2.1	7.4	ND	ND	ND	0.061	ND	442	150	557	0.29 HF	7.7	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
P5	180,000	ND	ND	150	ND	ND	1.6 B	4.1	0.66 J	ND	ND	0.034	ND	761	NS	1040	0.35 HF	4.4	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
P6	120,000	ND	ND	620	ND	ND	1.4 B	6	24.8	ND	ND	0.18	0.082	265	>82.08 b	592	ND	6	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
P7	74,000	ND	ND	ND	ND	0.044 J	1.5	2.6	11.5	ND	ND	0.036	ND	252	111 H b	468	ND	2.6	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
P8	81,000	ND	ND	2,200	ND	ND	1.3	4.7	ND	ND	ND	0.074	ND	239	22.9 B	470	ND	4.7	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
P9																									Not Sampled For These Parameters			
P10																									Not Sampled For These Parameters			

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
A1-GP15-S	Monitoring event	BL1	6/17/2010	-1783	15	0.54	687.7	687.2	6.88	3.94	1.1	0.657	18.5	12.88	NS
	Monitoring event	BL3	8/2/2010	-1737	15	4.2	687.7	683.5	6.97	1.71	-21.2	0.725	6.1	20.69	NS
	Monitoring event	BL4	3/11/2015	-55	15	1.2	687.7	686.5	6.85	1.4	42	0.801	59.8	6.37	2.2
	Monitoring event	P1	7/29/2015	85	15	3.2	687.7	684.5	7.61	5.79	42.1	0.725	50.2	22.04	3.6 B
	Monitoring event	P2	4/8/2016	339	15	0.1	687.7	687.6	7.14	6.13	3.5	0.647	99	8.46	2.9
	Monitoring event	P2	7/11/2016	433	15	6.11	687.7	681.6	7.3	5.96	14.2	0.73	53	18.69	3.4
	Monitoring event	P3	10/7/2016	521	15	11	687.7	676.7	7.52	3.2	138.7	0.675	86.7	15.46	2.7
	Monitoring event	P4	1/23/2017	629	15	NA	687.7	NA	6.66	1.49	75.2	0.687	50	9.6	5.2
	Monitoring event	P5	4/12/2017	708	15	0.35	687.7	687.3	7.48	11.4	50.6	0.494	47.6	11.4	3.2
	Monitoring event	P6	7/1/2017	788			687.7	687.7							
	Monitoring event	P7	10/1/2017	880			687.7	687.7							

VOCs (ug/L)

Event	Date	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	6/17/2010	ND	ND	ND	ND	ND	ND	ND	ND	9.3 J	23 J	ND	0.52 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL3	8/2/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL4	3/11/2015	Not Sampled For These Parameters																										
P1	7/29/2015	3	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	6.5	ND	ND	ND	ND	ND	ND	ND	ND	4	ND	ND
P2	4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P2	7/11/2016	0.99 J	ND	ND	4.5	ND	ND	ND	ND	ND	4.0 J	ND	ND	0.47 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	10/7/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	1/23/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	4/12/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	7/1/2017																											
P7	10/1/2017																											

Event	Dissolved Gasses (ug/L): Carbon Dioxide	Ethane	Ethene	Methane	Wet Chemistry (mg/L): Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
BL1–P7	Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
A1-GP18-S	Monitoring event	BL1	6/18/2010	-1782	18	4.12	690.4	686.3	6.95	6.28	36.3	0.737	30	13.31	NS
	Monitoring event	BL2	8/2/2010	-1737	15	5.25	690.4	685.1	7.12	3.36	-66.8	0.677	5.1	16.29	NS
	Monitoring event	BL3	11/5/2014	-181	18	4.5	690.4	685.9	7.3	3.11	-69.7	0.587	NS	12.36	NS
	Monitoring event	BL4	3/11/2015	-55	18	5.25	690.4	685.1	7.38	1.93	50	0.699	11	8.35	1
	Monitoring event	P1	7/27/2015	83	18	5.35	690.4	685	6.08	0.89	-40.5	3.265	22.9	14.3	829 B
	Monitoring event	P2	1/7/2016	247	18	4.65	690.4	685.7	7.01	NS	-48.2	1.726	NS	8.24	178
	Monitoring event	P3	4/8/2016	339	18	3.2	690.4	687.2	6.94	1.41	-94.3	1.186	893	7.65	89.1
	Monitoring event	P4	7/8/2016	430	18	7.1	690.37	683.27	NA	1.47	-5.2	1.059	>1000	14.21	20.5
	Monitoring event	P5	10/7/2016	521	18	9.1	690.4	681.3	7.05	6.46	46.1	1.414	69	16.75	8.9
	Monitoring event	P6	1/23/2017	629	18	NA	690.37	NA	7.14	0.45	-117.3	0.758	50	10.38	5.1
	Monitoring event	P7	4/10/2017	706	18	3.72	690.4	686.7	7.04	NA	-70.1	763	333	6.5	4.9
	Monitoring event	P8	7/1/2017	788			690.4	690.4							
	Monitoring event	P9	10/1/2017	880			690.4	690.4							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL3	Not Sampled For These Parameters																										
BL4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P1	ND	ND	ND	ND	ND	ND	ND	130	ND	140	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P2	ND	ND	ND	ND	ND	ND	ND	50	ND	16 J	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	ND	36	ND	18 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	20	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	ND	4.2 J	ND	5.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND
P7	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P8																											
P9																											

Dissolved Gasses (ug/L); Wet Chemistry (mg/L); Q Potential (DNA) (cells / mL)

Event	Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	Functional Genes: BAV1 VC R-Dase (1)	Functional Genes: VC R-Dase
BL1	Not Sampled For These Parameters																											
BL2																												
BL3	8,200	NS	NS	260	3.11	ND	2.3	121	27.8	NS	ND	0.65	0.18 B	ND	ND	359 B	ND HF	121	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
BL4	Not Sampled For These Parameters																											
P1	17,000	ND	ND	520	0.89	ND	0.83	17.8	ND	NS	ND	1.2	0.24	2440	1140	1100	2.1	19.9	329	ND	ND	111	446	ND	Not Sampled For These Parameters			
P2	6,100	ND	ND	1,800	ND	ND	0.23	2	ND	ND	ND	0.5	0.16	596	ND	775 B	ND	2	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
P3	6,700	ND	ND	1,100	ND	ND	0.76	34	ND	ND	ND	0.41	ND	147	101 H	660	ND	34	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
P4	69,000	ND	ND	910	ND	ND	0.39 B	19.3	ND	ND	ND	2.0 B	0.05	41.7 B	14.2 b	489	0.12 H F	19.4	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
P5	80,000	ND	ND	2,400	ND	ND	0.73 B	32.7	1.8 J	2.8	ND	1.7	0.1	54.7	5.8 B	442	ND	32.7	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
P6	53,000	ND	ND	1,000	ND	ND	0.63	8.2	21.3	ND	ND	0.72	0.015 J	6.5 JF1	54.7 H b	415	ND	8.2	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
P7	68,000	ND	ND	1,900	ND	ND	0.65	8.1	16.4	ND	ND	0.5	ND	ND	5.1	435	ND	8.1	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
P8																									Not Sampled For These Parameters			
P9																									Not Sampled For These Parameters			

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth	Well: Water Level Measurement	Well: Top of Casing Elevation	Well: Head Elevation	Field Parameters: pH	Field Parameters: Dissolved Oxygen	Field Parameters: Oxidation Reduction Potential	Field Parameters: Specific Conductance	Field Parameters: Turbidity	Field Parameters: Temperature	Carbon, Total Organic
					(feet)	(ft. ATOC)	(ft. AMSL)	(ft. AMSL)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	(°C)	(mg/L)
MW-30	Monitoring event	BL1	6/18/2010	-1782	18.85	3.09	689.7	686.6	7.08	3.16	-90.7	0.922	16.44	17.84	NS
MW-30	Monitoring event	BL2	8/3/2010	-1736	18.85	3.9	689.7	685.8	7.7	1.0	-123	0.917	2.22	19.27	NS
MW-30	Monitoring event	P1	7/29/2015	85	18.85	3.95	689.7	685.7	7.34	0.39	-120	0.846	1.49	18.73	3.7
MW-30	Monitoring event	P2	4/8/2016	339	18.85	2.95	689.7	686.7	7.47	0.27	-72	0.626	10.94	10.41	2.5 B
MW-30	Monitoring event	P3	7/14/2016	436	18.85	10.9	689.7	678.8	7.37	0.09	-123	0.734	5.59	17.56	3.4
MW-30	Monitoring event	P4	10/11/2016	525	18.85	10.4	689.7	679.3	7.50	0.56	-112	0.829	5.34	18.11	3.3
MW-30	Monitoring event	P5	1/25/2017	631	18.85	3.96	689.7	685.7	7.41	0.45	-59	0.785	11.5	11.71	3.2
MW-30	Monitoring event	P6	4/12/2017	708	18.85	12.35	689.7	677.3	7.43	0.26	-114	0.759	14.6	11.2	2.9
MW-30	Monitoring event	P7	7/1/2017	788			689.7	689.7							
MW-30	Monitoring event	P8	10/1/2017	880			689.7	689.7							

Event	VOCs (ug/L): 1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	ND	ND	ND	2.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.4	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	4.9J	ND
BL2	ND	ND	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	ND	ND	ND	ND	ND	ND	ND	ND	1.6 J	5.9	ND
P1	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	1.1	1.4	ND
P2	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND
P3	ND	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND
P4	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	0.56 J	1.3	ND
P5	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND
P6	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND
P7																											
P8																											

Dissolved Gasses (ug/L)				Wet Chemistry (mg/L)																				Q Potential (DNA) (cells / mL)			
Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-35S	Monitoring event	BL1	6/17/2010	-1783	14.5	1.58	688.6	687	6.49	9.72	145.5	0.955	1.6	13.17	NS
MW-35S	Monitoring event	BL2	8/2/2010	-1737	14.5	5.71	688.6	682.9	6.33	1.38	-3.9	0.955	0.89	17.63	NS
MW-35S	Monitoring event	BL3	3/11/2015	-55	15	3.6	688.6	685	7.07	3.9	82.4	0.873	5.65	7.03	2.4
MW-35S	Monitoring event	P1	7/28/2015	84	15	4.95	688.6	683.6	7.15	4.43	105.8	0.865	2.51	17.26	2 B
MW-35S	Monitoring event	P2	4/8/2016	339	15	0.56	688.6	688	7.3	5.51	29.2	0.54	11.2	7.4	5.4
MW-35S	Monitoring event	P3	7/13/2016	435	15	7.95	688.6	680.6	7.07	0.49	-13.3	0.874	5.24	16.53	2.1
MW-35S	Monitoring event	P4	10/11/2016	525	15	13.15	688.6	675.4	7.24	1.66	17.6	0.811	5.47	15.11	3
MW-35S	Monitoring event	P5	1/23/2017	629	15	1.25	688.6	687.3	7.16	6.73	32.2	0.825	2.96	8.79	2.1
MW-35S	Monitoring event	P6	4/10/2017	706	15	0.6	688.6	688	6.96	4.65	119.1	0.815	3.21	10.7	2.3
MW-35S	Monitoring event	P7	7/1/2017	788			688.6	688.6							
MW-35S	Monitoring event	P8	10/1/2017	880			688.6	688.6							

VOCs (ug/L)

Well ID	Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
MW-35S	BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	BL2	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	BL3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P4	ND	ND	ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-35S	P7																											
MW-35S	P8																											

Dissolved Gasses (ug/L): Carbon Dioxide, Ethane, Ethene, Methane

Wet Chemistry (mg/L): Dissolved Oxygen, Nitrate, Manganese, Ferric iron, Sulfate, Sulfide, Nitrite, Phosphorous, Ammonia, COD, BOD, Total Alkalinity, Ferrous Iron, Iron, Acetic Acid, Formic Acid, Lactic Acid, n-Butyric Acid, Propionic Acid, Pyruvic Acid

Q Potential (DNA) (cells / mL): Dechlorinating Bacteria – Dehalococcoides spp (1); Functional Genes – TCE R-Dase (1), BAV1 VC R-Dase (1), VC R-Dase

Well ID	Dissolved Gasses / Wet Chemistry / Q Potential (DNA)
MW-35S	Not Sampled For These Parameters

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-36S	Monitoring event	BL1	6/17/2010	-1783	15	2.98	689.8	686.8	6.82	13.05	135.3	1.227	3.31	14.41	NS
MW-36S	Monitoring event	BL2	8/3/2010	-1736	15	5.4	689.8	684.4	6.85	1.6	-85.7	1.139	2.7	16.28	NS
MW-36S	Monitoring event	BL3	3/10/2015	-56	15	3.21	689.8	686.6	6.95	2.87	214.7	1.064	2.43	6.03	2
MW-36S	Monitoring event	P1	7/29/2015	85	15	3.85	689.8	686	6.12	0.18	-142.1	2.958	3.81	17.43	1130 B
MW-36S	Monitoring event	P2	4/8/2016	339	15	3.1	689.8	686.7	6.87	0.83	-107.2	1.552	1.2	8.21	76.5
MW-36S	Monitoring event	P3	7/11/2016	433	15	7.54	689.8	682.2	6.86	0.45	-71.6	1.613	10.4	14.47	21.5
MW-36S	Monitoring event	P4	10/12/2016	526	15	5.9	689.8	683.9	5.79	0.3	-145	10.07	19.7	17.16	15.1
MW-36S	Monitoring event	P5	1/24/2017	630	15	2.9	689.8	686.9	7.05	0.2	-241	1.268	7.44	6.84	6.1
MW-36S	Monitoring event	P6	4/12/2017	708	15	5.15	689.8	684.6	6.8	0.07	-187	1.189	4.61	7.6	4.5
MW-36S	Monitoring event	P7	7/1/2017	788			689.8	689.8							
MW-36S	Monitoring event	P8	10/1/2017	880			689.8	689.8							

VOCs (ug/L)

Well ID	Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
MW-36S	BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	2.6 J	ND	ND	ND	ND	ND	ND	ND	ND	7.2	ND	ND
MW-36S	BL2	ND	ND	ND	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5 J	ND	ND	ND	ND	ND	ND	ND	ND	0.58 J	ND	ND
MW-36S	BL3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P1	ND	ND	ND	0.52 J	ND	ND	28	170	ND	400	ND	2.1	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P2	ND	ND	ND	ND	ND	ND	ND	42	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P3	ND	ND	ND	ND	ND	ND	ND	22	ND	18	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P4	ND	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20 J	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0 J	ND	0.27 J	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-36S	P7																											
MW-36S	P8																											

Well ID	Dissolved Gasses (ug/L): Carbon Dioxide, Ethane, Ethene, Methane	Wet Chemistry (mg/L): Dissolved Oxygen, Nitrate, Manganese, Ferric iron, Sulfate, Sulfide, Nitrite, Phosphorous, Ammonia, COD, BOD, Total Alkalinity, Ferrous Iron, Iron, Acetic Acid, Formic Acid, Lactic Acid, n-Butyric Acid, Propionic Acid, Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1); Functional Genes: TCE R-Dase (1), BAV1 VC R-Dase (1), VC R-Dase
MW-36S (BL1–P8)	Not Sampled For These Parameters		

Well ID	Event / Description		Date	Elapsed Time (Days)	Total Depth (feet)	Water Level Measurement (ft. ATOC)	Top of Casing Elevation (ft. AMSL)	Head Elevation (ft. AMSL)	pH (SU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Specific Conductance (mS/cm)	Turbidity (NTUs)	Temperature (°C)	Carbon, Total Organic (mg/L)
					Well				**Field Parameters**						
	Monitoring event	BL1	4/7/2011	-1489	14.3	10.9	689.1	678.2	6.92	1.89	70.8	1.692	2.3	11.52	NS
	Monitoring event	BL2	3/12/2015	-54	14.3	1.8	689.1	687.3	6.94	0.91	-101.3	1.855	8.04	7.55	15.7
	Monitoring event	P1	6/12/2015	38	NS (Grab Sample)										ND
	Monitoring event	P2	7/27/2015	83	14.3	2.7	689.08	686.38	6.28	0.3	-92.7	2.521	2.85	19.35	1560
	Monitoring event	P3	4/8/2016	339	14.3	3	689.1	686.1	6.67	0.36	-111.7	1.96	7.48	9.49	620
MW-42S	Monitoring event	P4	7/14/2016	436	14.3	5.38	689.1	683.7	6.47	0.27	-81.4	2.784	5.54	18.7	796
	Monitoring event	P5	10/13/2016	527	14.3	2.3	689.1	686.8	6.83	0.21	-86.4	1.358	3.76	18.7	287
	Monitoring event	P6	1/25/2017	631	14.3	3.06	689.1	686	6.84	0.78	-95.7	1.643	3.12	8.83	238
	Monitoring event	P7	4/12/2017	708	14.3	1.68	689.08	687.4	7.02	0.12	-115.3	1.094	4.89	9.1	136
	Monitoring event	P8	7/1/2017	788			689.1	689.1							
	Monitoring event	P9	10/1/2017	880			689.1	689.1							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane
BL1	25,000	1,700	240 J	8,550	6,100	76	11	510 J	3.5 J	400	1.9	9	100 J
BL2	19,000	14,000	240	12,000	6,300	ND	ND	ND	ND	ND	ND	ND	160 J
P1	3,700	1,600	100	7,600	2,300	44 J	ND	ND	ND	ND	ND	ND	ND
P2	1,700	660	71 J	9,700	2,400	44 J	ND	ND	ND	ND	ND	ND	170 J
P3	3,600	5,000	ND	7,100	5,000	ND	ND	ND	ND	ND	ND	ND	15,000
P4	12,000	8,300	120 J	11,000	7,800	110 J	ND	ND	ND	ND	ND	ND	10,000
P5	440	640	ND	2,000	520	ND	ND	ND	ND	ND	ND	ND	14,000
P6	1,200	1,600	ND	2,900	790	130 J	ND	ND	ND	ND	ND	ND	21,000
P7	230	440	ND	1,700	220	74 J	ND	ND	ND	ND	ND	ND	10,000 F
P8													
P9													

Event	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	4.8	ND	1,000	ND	ND	ND	11	ND	6	1,100	31	13,000	27	ND
BL2	ND	ND	5,700	ND	ND	ND	ND	ND	ND	1,200	ND	12,000	ND	ND
P1	ND	ND	6,400	ND	ND	ND	ND	ND	ND	520	ND	2,700	ND	ND
P2	ND	ND	6,700	ND	ND	ND	ND	ND	ND	590	ND	280	ND	ND
P3	ND	ND	13,000	ND	ND	ND	140 J	ND	ND	1,000	ND	ND	610	ND
P4	ND	ND	29,000	890	ND	ND	120 J	ND	ND	2,100	ND	100 J	530	ND
P5	ND	ND	2,700	ND	ND	ND	ND	ND	ND	340	ND	ND	ND	ND
P6	ND	ND	3,800	ND	ND	ND	230 J	ND	ND	1,000	ND	ND	2,400	ND
P7	ND	ND	1,100	ND	ND	ND	ND	ND	ND	360	ND	ND	1,400	ND
P8														
P9														

Dissolved Gasses (ug/L), Wet Chemistry (mg/L), Q Potential (DNA) (cells / mL)

Event	Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
BL1																												
BL2	Not Sampled For These Parameters																											
P1																												
P2	Not Sampled For These Parameters																								<2.5E+01	<2.5E+01	<2.5E+01	<2.5E+01
P3																												
P4																												
P5	Not Sampled For These Parameters																											
P6																												
P7	Not Sampled For These Parameters																								3.98E+04	1.28E+04	<2.50E+01	1.04E+03
P8																												
P9																												

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-43S	Monitoring event	BL1	4/7/2011	-1489	14.5	2.57	689.1	686.6	7.04	5.68	47.2	0.794	3.62	11.93	NS
MW-43S	Monitoring event	BL2	3/12/2015	-54	14.5	2.68	689.1	686.5	7.45	1.0	-140	0.615	2.58	9.48	2.1
MW-43S	Monitoring event	P1	7/29/2015	85	14.5	2.35	689.14	686.79	5.63	0.31	-23.2	4.348	10.82	21.25	2,060 B
MW-43S	Monitoring event	P2	4/8/2016	339	14.5	2.3	689.1	686.8	6.89	0.28	-122	2.139	15.9	11.08	22.8
MW-43S	Monitoring event	P3	7/13/2016	435	14.5	2.15	689.14	686.99	6.82	0.07	-101.6	2.23	23.4	22.29	21
MW-43S	Monitoring event	P4	10/13/2016	527	14.5	3.27	689.1	685.9	6.88	0.22	-80.7	1.87	54.5	18.93	22.2
MW-43S	Monitoring event	P5	1/25/2017	631	14.5	2.00	689.1	687.1	6.81	0.78	-100	1.698	11.9	9.41	17
MW-43S	Monitoring event	P6	4/11/2017	707	14.5	2.94	689.1	686.2	6.77	0.15	-93.5	1.536	21.5	13.7	12.6
MW-43S	Monitoring event	P7	7/1/2017	788			689.1	689.1							
MW-43S	Monitoring event	P8	10/1/2017	880			689.1	689.1							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform
BL1	15	7.4	ND	13	3.5 J	ND	ND	3.3 J	ND	13	ND	1.1	12	ND
BL2	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P1	ND	ND	ND	29	ND	ND	3.1 J	250	ND	980	1.3	ND	13	ND
P2	ND	ND	ND	ND	ND	ND	ND	57	ND	33 J	ND	ND	9.8	ND
P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5	ND
P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND
P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.1	ND
P7														
P8														

Event	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	ND	34	ND	ND	0.69 J	ND	ND	ND	1.5	ND	15	19	1.7 J
BL2	ND	3.7	ND	ND	0.82 J	ND	ND	ND	ND	ND	ND	1.7	0.73
P1	ND	46	ND	ND	ND	ND	ND	ND	0.97 J	ND	0.60 J	7	1.7 J
P2	ND	ND	ND	ND	ND	5.4	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8	ND
P5	ND	ND	ND	ND	ND	3.0 J	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7													
P8													

Dissolved Gasses (ug/L): Carbon Dioxide, Ethane, Ethene, Methane; Wet Chemistry (mg/L): Dissolved Oxygen, Nitrate, Manganese, Ferric iron, Sulfate, Sulfide, Nitrite, Phosphorous, Ammonia, COD, BOD, Total Alkalinity, Ferrous Iron, Iron, Acetic Acid, Formic Acid, Lactic Acid, n-Butyric Acid, Propionic Acid, Pyruvic Acid; Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1); Functional Genes: TCE R-Dase (1), BAV1 VC R-Dase (1), VC R-Dase

Event	Dissolved Gasses / Wet Chemistry	Dehalococcoides spp (1)	TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
BL1	Not Sampled For These Parameters	Not Sampled For These Parameters			
BL2	Not Sampled For These Parameters	Not Sampled For These Parameters			
P1	Not Sampled For These Parameters	Not Sampled For These Parameters			
P2	Not Sampled For These Parameters	Not Sampled For These Parameters			
P3	Not Sampled For These Parameters	1.77E+02	1.58E+01J	<2.5E+01	<2.5E+01
P4	Not Sampled For These Parameters	Not Sampled For These Parameters			
P5	Not Sampled For These Parameters	Not Sampled For These Parameters			
P6	Not Sampled For These Parameters	Not Sampled For These Parameters			
P7	Not Sampled For These Parameters	Not Sampled For These Parameters			
P8	Not Sampled For These Parameters	Not Sampled For These Parameters			

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-44S	Monitoring event	BL	6/1/2011	-1434	15	8.55	689	680.4	7	7.45	324	0.66	45.1	15.98	NS
	Monitoring event	P1	7/29/2015	85	15	1.6	689	687.4	7.08	0.41	-140	1.004	3.04	15.84	31.6 B
	Monitoring event	P2	4/8/2016	339	15	1.55	689	687.5	7.23	0.43	-81	0.897	4.1	8.56	3.1
	Monitoring event	P3	7/14/2016	436	15	4	689	685	7.18	0.4	-99.5	0.954	3.99	15.47	2.1
	Monitoring event	P4	10/11/2016	525	15	2.55	689	686.5	7.21	1.28	-92.5	0.947	6.9	15.33	2.3
	Monitoring event	P5	1/25/2017	631	15	1.09	689	688	7.22	0.4	-82.6	0.915	7.86	8.32	2.4
	Monitoring event	P6	4/7/2017	703	15	0.89	689	688.2	7.12	0.32	-94.1	0.831	10.1	7.4	2.2
	Monitoring event	P7	7/1/2017	788			689	689							
	Monitoring event	P8	10/1/2017	880			689	689							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7																											
P8																											

Dissolved Gasses (ug/L): Carbon Dioxide	Ethane	Ethene	Methane	Wet Chemistry (mg/L): Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-35D	Monitoring event	BL1	6/17/2010	-1783	26	8.14	698.7	690.5	8.32	2.27	61.4	0.492	24.8	11.57	NS
	Monitoring event	BL2	8/2/2010	-1737	26	7.83	698.7	690.8	7.06	0.68	58.7	0.499	7.23	18.46	NS
	Monitoring event	BL3	11/5/2014	-181	NS	8	698.7	690.7	7.47	0.87	-56.6	0.399	NS	12.98	NS
	Monitoring event	BL4	3/12/2015	-54	29	6.65	698.7	692	7.23	1.08	-64	0.511	10.01	8.41	4.7
	Monitoring event	P1	7/28/2015	84	26	6.8	698.66	691.86	7.71	0.9	-104.4	0.454	4.18	13.97	3.3 B
	Monitoring event	P2	1/8/2016	248	26	7.6	698.7	691.1	7.73	0.84	-91.9	0.494	9.95	10.21	2.0 B
	Monitoring event	P3	4/8/2016	339	26	6.96	698.7	691.7	7.76	0.38	-28.5	0.407	7.11	9.53	1.9
	Monitoring event	P4	7/12/2016	434	26	7.42	698.66	691.24	7.58	0.13	-98.6	0.466	83.7	15.93	1.5
	Monitoring event	P5	10/11/2016	525	26	8.65	698.66	690.01	7.76	0.78	-115	0.455	26	14.3	1.9
	Monitoring event	P6	1/24/2017	630	26	8.07	698.66	690.59	7.61	0.35	-117.8	0.294	84	10.28	3.6 B
	Monitoring event	P7	4/10/2017	706	26	7.44	698.7	691.2	7.81	0.16	-153.8	0.39	15	13.4	2.9
	Monitoring event	P8	7/1/2017	788			698.7	698.7							
	Monitoring event	P9	10/1/2017	880			698.7	698.7							

VOCs (ug/L)

Well ID	Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
MW-35D	BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1 J	ND	0.71 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	BL2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.69 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	BL3	Not Sampled For These Parameters																										
	BL4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	P8																											
	P9																											

Dissolved Gasses (ug/L), Wet Chemistry (mg/L), Q Potential (DNA) (cells / mL)

Well ID	Event	Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	Functional Genes: BAV1 VC R-Dase (1)	Functional Genes: VC R-Dase
MW-35D	BL1	Not Sampled For These Parameters																											
	BL2	Not Sampled For These Parameters																											
	BL3	3,200	NS	NS	3,900	0.87	ND	0.05	2.3	9.1	NS	ND	0.009	0.37	18.7	5.2	260	0.12	2.4	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
	BL4	Not Sampled For These Parameters																											
	P1	1,600	0.0015 J	ND	2,900	0.9	ND	0.021	ND	4.4	NS	ND	ND	0.32	ND	5.6	256	4.8	0.49	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
	P2	610 J	ND	ND	1,200	ND	ND	0.031	1.3	5	ND	ND	0.094	0.31	ND	6.3 b	269 B	ND	1.3	NS	NS	NS	NS	NS	NS				
	P3	ND	ND	ND	1,600	ND	ND	0.12	5.1	6.8	ND	ND	0.056	0.23	12.4	2.4	221	0.094 J HF F1	5.2	NS	NS	NS	NS	NS	NS				
	P4	10,000	ND	ND	660	ND	ND	0.051 B	2.6	3.4 J B	ND	ND	0.034	0.26	ND	2.8 b	253	0.10 H F	2.7	NS	NS	NS	NS	NS	NS				
	P5	11,000	ND	ND	1,300	ND	ND	0.21 B	11.5	3.3	0.8 J	ND	0.66	12.2	ND	5	257	0.12	11.6	ND	ND	ND	ND	ND	ND				
	P6	8,900	ND	ND	1,400	ND	ND	0.083 B	3.7	5.6	ND	ND	0.12	0.13 F1	10.1	3.3 b	157	ND	3.7	ND	ND	ND	ND	ND	ND				
	P7	9,200	ND	ND	2,500	ND	ND	0.073	2.2	2.7	ND	ND	0.059	0.26	ND	3.7	238	ND	2.2	ND	ND	ND	ND	ND	ND				
	P8																												
	P9																												

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-36D	Monitoring event	BL1	6/17/2010	-1783	21	5.4	689.7	684.3	7.02	5.75	111	0.652	2.04	11.44	NS
MW-36D	Monitoring event	BL2	8/2/2010	-1737	21	6.3	689.7	683.4	6.92	1.41	-118.3	0.711	13.2	29.2	NS
MW-36D	Monitoring event	BL3	3/10/2015	-56	23.5	5.9	689.7	683.8	7.8	2.84	46.3	0.647	15.2	8.59	1.2
MW-36D	Monitoring event	P1	7/29/2015	85	23.5	6.25	689.66	683.41	5.75	0.3	-64.1	5.357	54.5	15	4,880 B
MW-36D	Monitoring event	P2	4/8/2016	339	23.5	5.4	689.7	684.3	5.55	0.49	3.5	4.533	2.3	9.03	4,530 B
MW-36D	Monitoring event	P3	7/11/2016	433	23.5	7.65	689.74	682.09	5.81	1.38	-36.4	7.885	19.9	13.82	4,210
MW-36D	Monitoring event	P4	10/12/2016	526	23.5	9.1	689.74	680.64	5.79	0.3	-145.2	10.07	19.7	17.16	5,930
MW-36D	Monitoring event	P5	1/24/2017	630	23.5	5.88	689.7	683.9	6.76	0.31	-146	4.677	34.3	8.07	1,590
MW-36D	Monitoring event	P6	4/12/2017	708	23.5	5.15	689.7	684.6	6.4	0.12	-116	4.997	26.1	9.3	2,970
MW-36D	Monitoring event	P7	7/1/2017	788			689.7	689.7							
MW-36D	Monitoring event	P8	10/1/2017	880			689.7	689.7							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND
BL2	ND	ND	ND	ND	ND	ND	ND	200	ND	21 J	ND	0.93 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.74 J	ND	ND
BL3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P1	ND	ND	ND	0.57 J	ND	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.67 J	ND	ND	ND	ND	ND	ND	ND
P2	ND	ND	ND	ND	ND	ND	ND	600	ND	580	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	ND	910	ND	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	1,100	ND	650	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	ND	660	ND	260	ND	0.96 J	ND	ND	ND	ND	ND	ND	ND	6.0	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	930	ND	480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7																											
P8																											

Dissolved Gasses (ug/L)	Wet Chemistry (mg/L)	Q Potential (DNA) (cells / mL)
Carbon Dioxide, Ethane, Ethene, Methane	Dissolved Oxygen, Nitrate, Manganese, Ferric iron, Sulfate, Sulfide, Nitrite, Phosphorous, Ammonia, COD, BOD, Total Alkalinity, Ferrous Iron, Iron, Acetic Acid, Formic Acid, Lactic Acid, n-Butyric Acid, Propionic Acid, Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1); Functional Genes: TCE R-Dase (1), BAV1 VC R-Dase (1), VC R-Dase
Not Sampled For These Parameters		

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-37D	Monitoring event	BL1	6/18/2010	-1782	20	4.35	690.1	685.7	7.23	5.14	-79	0.802	8.9	11.45	NS
MW-37D	Monitoring event	BL2	8/3/2010	-1736	20	5.30	690.1	684.8	7.15	1.08	-139	0.786	2.98	15.21	NS
MW-37D	Monitoring event	BL3	3/10/2015	-56	22.5	4.98	690.1	685.1	8	0.59	-80.3	0.662	0.073	9.2	0.65 J
MW-37D	Monitoring event	P1	7/29/2015	85	22.5	5.4	690.05	684.65	6.42	0.52	-84.5	2.371	29.6	13.94	1,060 B
MW-37D	Monitoring event	P2	4/8/2016	339	22.5	4.28	690.1	685.8	6.89	0.15	-107	1.999	20	8.28	294
MW-37D	Monitoring event	P3	7/12/2016	434	22.5	7.00	690.1	683.1	9.95	0.35	-105	1.411	7.34	13.28	60.9
MW-37D	Monitoring event	P4	10/12/2016	526	22.5	8.35	690.1	681.7	6.98	0.35	-89.9	0.969	10.77	12.87	22.8
MW-37D	Monitoring event	P5	1/24/2017	630	22.5	4.86	690.1	685.2	6.93	0.25	-87.7	1.003	11.1	9.52	18.3
MW-37D	Monitoring event	P6	4/11/2017	707	22.5	4.12	690.1	685.9	7	0.03	-110	0.852	11.4	10.7	6.3
MW-37D	Monitoring event	P7	7/1/2017	788			690.1	690.1							
MW-37D	Monitoring event	P8	10/1/2017	880			690.1	690.1							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL2	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7 J	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P1	ND	ND	ND	ND	ND	ND	ND	280	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P2	ND	ND	ND	ND	ND	ND	ND	390 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	1.6 J	130	ND	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	ND	6	ND	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	ND	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P7																											
P8																											

Group	Parameters	Units	MW-37D (BL1–P8)
Dissolved Gasses	Carbon Dioxide, Ethane, Ethene, Methane	(ug/L)	Not Sampled For These Parameters
Wet Chemistry	Dissolved Oxygen, Nitrate, Manganese, Ferric iron, Sulfate, Sulfide, Nitrite, Phosphorous, Ammonia, COD, BOD, Total Alkalinity, Ferrous Iron, Iron, Acetic Acid, Formic Acid, Lactic Acid, n-Butyric Acid, Propionic Acid, Pyruvic Acid	(mg/L)	Not Sampled For These Parameters
Q Potential (DNA) – Dechlorinating Bacteria	Dehalococcoides spp (1)	(cells / mL)	Not Sampled For These Parameters
Q Potential (DNA) – Functional Genes	TCE R-Dase (1), BAV1 VC R-Dase (1), VC R-Dase	(cells / mL)	Not Sampled For These Parameters

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-38D	Monitoring event	BL	6/22/2010	-1778	21	15.21	689.7	674.5	7.05	1.1	20.5	0.716	2.1	14.23	NS
MW-38D	Monitoring event	BL2	8/4/2010	-1735	21	6.25	689.7	683.4	6.92	0.79	-46.9	0.718	1.43	18.1	NS
MW-38D	Monitoring event	BL3	11/5/2014	-181	24	5.51	689.7	684.2	7.7	0.21	-114.6	0.658	NS	12.85	NS
MW-38D	Monitoring event	BL4	3/10/2015	-56	24	5.32	689.7	684.3	7.78	0.62	-2.3	0.778	25.7	7.89	2.5
MW-38D	Monitoring event	P1	6/12/2015	38	NS (Grab Sample)										
MW-38D	Monitoring event	P2	7/27/2015	83	24	5.65	689.66	684.01	5.67	0.36	-57.6	5.771	739	17.39	7,240
MW-38D	Monitoring event	P3	1/7/2016	247	24	5.2	689.66	684.46	5.39	0.51	22.2	6.189	27.7	9.7	4,650
MW-38D	Monitoring event	P4	4/8/2016	339	24	4.69	689.66	684.97	6.31	0.65	-75	4.248	21.6	8.83	2,540
MW-38D	Monitoring event	P5	7/12/2016	434	24	6.3	689.66	683.36	6.89	0.07	-159	5.553	51.6	18.55	2,270
MW-38D	Monitoring event	P6	10/12/2016	526	24	7.35	689.66	682.31	7.33	1.6	-149.4	3.317	51.9	14.3	1,310 B
MW-38D	Monitoring event	P7	1/23/2017	629	24	5.22	689.66	684.44	7.33	1.08	-138.8	2.997	38	10.38	650
MW-38D	Monitoring event	P8	4/12/2017	708	24	4.4	689.66	685.26	7.32	0.01	-163.5	2.526	17.9	8.4	459 B

VOCs (ug/L)

Well ID	Event	Date	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
MW-38D	BL	6/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,400	ND	270	ND	ND	ND	230 J	300	ND	11,000	ND	730 J
MW-38D	BL2	8/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13,000	ND	ND	ND	ND	ND	130	ND	ND	2,100	ND	260 J
MW-38D	BL3	11/5/2014	Not Sampled For These Parameters																										
MW-38D	BL4	3/10/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	290	ND	ND	ND	ND	ND	ND	ND	ND	1.9	260	ND
MW-38D	P1	6/12/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	18 J	50	ND
MW-38D	P2	7/27/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	390	ND	3.8 J	ND	ND	ND	ND	ND	ND	6.8	60	4.8 J
MW-38D	P3	1/7/2016	ND	ND	ND	ND	ND	ND	ND	610	ND	880	ND	ND	ND	ND	ND	560	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND
MW-38D	P4	4/8/2016	ND	ND	ND	3.8 J	1.3 J	ND	6.9 J	1,000	ND	120	ND	ND	ND	ND	ND	850	ND	7.3	ND	9.1	ND	ND	ND	ND	ND	240	15
MW-38D	P5	7/12/2016	ND	ND	ND	ND	ND	ND	ND	1,100	ND	130	ND	ND	ND	ND	ND	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	59	ND
MW-38D	P6	10/12/2016	ND	ND	ND	5.1 J	ND	ND	ND	860	ND	110	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7 J	ND	ND	58	8.2 J
MW-38D	P7	1/23/2017	ND	ND	ND	ND	ND	ND	ND	520	ND	87 J	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.7 J	ND	ND	14	9.3 J
MW-38D	P8	4/12/2017	ND	ND	ND	2.1 J	ND	ND	ND	660	ND	86	ND	ND	17	ND	ND	ND	ND	5.7	ND	2.0 J	ND	ND	7.5	ND	ND	6.7	13

Dissolved Gasses (ug/L), Wet Chemistry (mg/L), Q Potential (DNA) (cells / mL)

Well ID	Event	Date	Carbon Dioxide	Ethane	Ethene	Methane	Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	Functional Genes: BAV1 VC R-Dase (1)	Functional Genes: VC R-Dase
MW-38D	BL	6/22/2010	Not Sampled For These Parameters																											
MW-38D	BL2	8/4/2010																												
MW-38D	BL3	11/5/2014	5,500	NS	NS	1,200	0.21	ND	0.025	0.98	4.8	NS	ND	0.27	0.14	229	68.2	489	ND	0.98	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
MW-38D	BL4	3/10/2015	Not Sampled For These Parameters																											
MW-38D	P1	6/12/2015																												
MW-38D	P2	7/27/2015	79,000	ND	ND	6,000	0.36	ND	2	397	ND	ND	ND	2.3	0.49	33600	18900	5150	105	502	2420	693	746	1860	966	ND	8.41E+02	<2.50E+01	1.20E+02	1.47E+01J
MW-38D	P3	1/7/2016	20,000	ND	ND	570	ND	ND	3	ND	2.0 J	ND	ND	1.8	0.57	14,300	ND	5860	664 HF	477	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
MW-38D	P4	4/8/2016	9,700	ND	ND	1,300	ND	ND	2.4	102	ND	ND	ND	1.1	4.4	8,670	>1499.20 H	4220	347 HF	449	NS	NS	NS	NS	NS	NS				
MW-38D	P5	7/12/2016	140,000	ND	ND	5,400	ND	ND	1.0 B	108	ND	0.064 J	ND	2	3.5	37600	>1477.73 H b	3910	119 HF	227	NS	NS	NS	NS	NS	NS	4.00E+04	1.78E+02	2.22E+04	6.96E+02
MW-38D	P6	10/12/2016	100,000	ND	ND	1,900	ND	ND	0.042 B	32.8	ND	ND	ND	0.36	0.52	3,860	>89.20B	3,020	0.41 HF	33.2	ND	ND	ND	ND	ND	ND	Not Sampled For These Parameters			
MW-38D	P7	1/23/2017	6,000	ND	ND	200	ND	ND	0.022	18.2	20.9 J	ND	ND	0.69	0.87	2,050	2,040 H b	2,290	15.3 HF	33.5	ND	ND	ND	ND	ND	ND				
MW-38D	P8	4/12/2017	120,000	ND	ND	4,300	ND	ND	0.017	24	ND	ND	ND	0.59	ND	1,300	667 Hb	2,290 B	0.096 JHF	24.1	ND	ND	ND	ND	ND	ND	2.52E+04	7.24E+02	2.20E+02	9.12E+02

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-39D	Monitoring event	BL1	6/18/2010	-1782	20	4	689.7	685.7	7.1	4.93	-49.6	0.724	12.09	11.89	NS
	Monitoring event	BL2	8/3/2010	-1736	20	5	689.7	684.7	7.1	1.57	-138	0.724	18	15.89	NS
	Monitoring event	BL3	3/10/2015	-56	22.5	4.7	689.7	685	7.81	0.77	-47.4	0.655	1.75	8.85	0.55 J
	Monitoring event	P1	7/29/2015	85	22.5	5.2	689.7	684.5	5.76	0.4	-63	5.088	767	17.12	3340 B
	Monitoring event	P2	4/8/2016	339	22.5	4.08	689.7	685.6	6.77	0.43	-144	3.505	120	7.17	2250
	Monitoring event	P3	7/12/2016	434	22.5	6.7	689.7	683	6.77	0.45	-119	2.287	44.4	14.8	436
	Monitoring event	P4	10/13/2016	527	22.5	7.8	689.7	681.9	6.85	0.41	-91.2	1.807	35.7	12.21	127
	Monitoring event	P5	1/24/2017	630	22.5	4.65	689.7	685.1	6.85	0.29	-117	1.613	27.1	9.12	57.4
	Monitoring event	P6	4/11/2017	707	22.5	3.84	689.7	685.9	6.78	0.03	-120	1.35	25	11	30.7
	Monitoring event	P7	7/1/2017	788			689.7	689.7							
	Monitoring event	P8	10/1/2017	880			689.7	689.7							

VOCs (ug/L)

Event	1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
BL1	17	ND	ND	4.7 J	2.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL2	13	ND	ND	5.8	3.1 J	ND	ND	ND	ND	4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BL3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P1	ND	ND	ND	0.80 J	ND	ND	ND	420	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND
P2	ND	ND	ND	ND	ND	ND	ND	910	ND	250 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P3	ND	ND	ND	ND	ND	ND	2.7 J	340	ND	83	ND	0.27 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P4	ND	ND	ND	ND	ND	ND	1.3 J	170	ND	48	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P5	ND	ND	ND	ND	ND	ND	2.6 J	180	ND	43	ND	0.24 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P6	ND	ND	ND	ND	ND	ND	1.3 J	28	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.73 J	ND	ND	ND	ND
P7																											
P8																											

Dissolved Gasses (ug/L): Carbon Dioxide	Ethane	Ethene	Methane	Wet Chemistry (mg/L): Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
Not Sampled For These Parameters																											

Well ID	Event / Description		Date	Elapsed Time (Days)	Well: Total Depth (feet)	Well: Water Level Measurement (ft. ATOC)	Well: Top of Casing Elevation (ft. AMSL)	Well: Head Elevation (ft. AMSL)	Field Parameters: pH (SU)	Field Parameters: Dissolved Oxygen (mg/L)	Field Parameters: Oxidation Reduction Potential (mV)	Field Parameters: Specific Conductance (mS/cm)	Field Parameters: Turbidity (NTUs)	Field Parameters: Temperature (°C)	Carbon, Total Organic (mg/L)
MW-40D	Monitoring event	BL1	6/21/2010	-1779	22.8	3.53	689.2	685.7	6.91	1.01	69	0.719	3.74	13.22	NS
	Monitoring event	BL2	8/3/2010	-1736	22.8	4.3	689.2	684.9	7.2	1.95	-202	0.693	3.5	17.37	NS
	Monitoring event	BL3	11/6/2014	-180	NS	NS	NS	NS	8.31	NS	-14	0.624	NS	12.18	NS
	Monitoring event	BL4	3/11/2015	-55	22.5	3.95	689.2	685.2	9.01	0.75	-15.1	0.669	2.09	8.81	1.8
	Monitoring event	P1	6/12/2015	38	NS (Grab Sample)										ND
	Monitoring event	P2	7/27/2015	83	22.5	4.25	689.19	684.94	6.54	0.56	-108.9	2.82	21.6	15.85	1260
	Monitoring event	P3	1/7/2016	247	22.5	3.25	689.19	685.94	7.47	0.37	-163.4	1.497	9.17	11.39	313
	Monitoring event	P4	4/8/2016	339	22.5	2.892	689.19	686.298	7.59	0.12	-161	1.092	18.2	7.16	202
	Monitoring event	P5	7/11/2016	433	22.5	4.95	689.19	684.24	7.12	1.2	-135	2.045	19	18.53	614
	Monitoring event	P6	10/11/2016	525	22.5	5.77	689.19	683.42	7.13	1.64	-94.9	1.788	18.8	15.42	267
	Monitoring event	P7	1/25/2017	631	22.5	3.64	689.19	685.55	7.08	0.37	-118.3	1.228	13.9	9.5	146
	Monitoring event	P8	4/10/2017	706	22.5	2.88	689.19	686.31	7.05	0.17	-136.3	1.115	15	13.9	172
	Monitoring event	P9	7/1/2017	788			689.2	689.2							
	Monitoring event	P10	10/1/2017	880			689.2	689.2							

Well ID	Event / Description		Date	VOCs (ug/L): 1,1,1-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dichlorodifluoromethane	Ethylbenzene	Methylcyclohexane	Methylene chloride	Methyl Acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes, Total
MW-40D	Monitoring event	BL1	6/21/2010	23	ND	ND	260	1.8 J	ND	ND	ND	ND	3.4 J	ND	ND	1.4 J	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	2.8 J	ND	1.1 J
	Monitoring event	BL2	8/3/2010	25	ND	ND	550	6 J	ND	ND	ND	ND	ND	ND	4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	BL3	11/6/2014	Not Sampled For These Parameters																										
	Monitoring event	BL4	3/11/2015	2,800	110	ND	5,400	200	ND	ND	ND	ND	ND	ND	ND	1,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	67	ND
	Monitoring event	P1	6/12/2015	ND	ND	ND	1,800	ND	ND	ND	ND	ND	ND	ND	ND	380	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P2	7/27/2015	ND	ND	ND	12,000	64 J	ND	ND	260 J	ND	ND	ND	ND	1,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P3	1/7/2016	ND	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	4900 F1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P4	4/8/2016	ND	ND	ND	220	ND	ND	ND	ND	ND	ND	ND	ND	2,500	ND	ND	ND	ND	ND	ND	46 J	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P5	7/11/2016	ND	ND	ND	12 J	ND	ND	ND	380	ND	ND	ND	ND	950 F1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P6	10/11/2016	ND	ND	ND	71	ND	5.2 J	ND	140 J	ND	ND	ND	ND	1,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P7	1/25/2017	ND	ND	ND	180	ND	4.8 J	ND	130 J	ND	ND	ND	ND	1,200 F1	ND	ND	ND	ND	ND	ND	14 J	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P8	4/10/2017	43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,200	ND	ND	ND	ND	ND	ND	39 J	ND	ND	ND	ND	ND	ND	ND
	Monitoring event	P9	7/1/2017																											
	Monitoring event	P10	10/1/2017																											

Well ID	Event / Description		Date	Dissolved Gasses (ug/L): Carbon Dioxide	Ethane	Ethene	Methane	Wet Chemistry (mg/L): Dissolved Oxygen	Nitrate	Manganese	Ferric iron	Sulfate	Sulfide	Nitrite	Phosphorous	Ammonia	COD	BOD	Total Alkalinity	Ferrous Iron	Iron	Acetic Acid	Formic Acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid	Q Potential (DNA) (cells / mL): Dechlorinating Bacteria: Dehalococcoides spp (1)	Functional Genes: TCE R-Dase (1)	BAV1 VC R-Dase (1)	VC R-Dase
MW-40D	Monitoring event	BL1	6/21/2010	Not Sampled For These Parameters																											
	Monitoring event	BL2	8/3/2010																												
	Monitoring event	BL3	11/6/2014	1,400	NS	NS	1,400	0.46	ND	0.002	0.24	ND	NS	ND	ND	0.61	12.9	2.7	291	ND	0.24	NS	NS	NS	NS	NS	NS	Not Sampled For These Parameters			
	Monitoring event	BL4	3/11/2015	Not Sampled For These Parameters																											
	Monitoring event	P1	6/12/2015																												
	Monitoring event	P2	7/27/2015	7,600	ND	ND	1,800	0.56	ND	0.44	59.7	ND	NS	ND	0.92	0.2	4220	2890	1900	44.3	104	1300	ND	ND	95	672	ND	Not Sampled For These Parameters			
	Monitoring event	P3	1/7/2016	3,300	ND	ND	2,500	ND	ND	0.23	24.4	2.1 J	0.090 J	ND	0.41	0.27 F1	2600 B	738 H	966	ND	24.4	NS	NS	NS	NS	NS	NS				
	Monitoring event	P4	4/8/2016	3,100	ND	ND	1,200	ND	ND	0.077	19.7	ND	0.13	ND	0.32	0.25	623	557	771	0.078 J HF	19.8	NS	NS	NS	NS	NS	NS				
	Monitoring event	P5	7/11/2016	46,000	ND	ND	1,200	ND	ND	0.064 B	17.1	ND	ND	ND	0.41	0.29	2080 B	>1374.27 H b	1330	0.77 HF	17.9	NS	NS	NS	NS	NS	NS				
	Monitoring event	P6	10/11/2016	81,000	ND	ND	1,500	ND	ND	0.025 B	16.6	ND	ND	ND	0.35	0.32	817	254 HB	9,066	0.21 HF	16.8	ND	ND	ND	ND	ND	ND				
	Monitoring event	P7	1/25/2017	54,000	ND	ND	1,100	ND	ND	0.011	6.4	ND	ND	ND	0.24	0.43	466	222 b	697	0.13 HF	6.5	ND	ND	ND	ND	ND	ND				
	Monitoring event	P8	4/10/2017	43,000	ND	ND	3,200	ND	ND	0.0052	4	ND	ND	ND	0.2	0.44	649	331	620	ND	4	ND	ND	ND	ND	ND	ND				
	Monitoring event	P9	7/1/2017																												
	Monitoring event	P10	10/1/2017																												

Notes:

ND	The compound was analyzed for but not detected at, or above, the reporting limit.
NS	Indicates parameter was not measured or analyzed.
J	Result is less than the RL but greater that or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
b	Result detected in the unseeded control blank.
HF	Field parameter with a holding time of 15 minutes.
mg/L	Milligrams per liter, equivalent to parts per million.
ug/L	Micrograms per liter, equivalent to parts per billion.
ppb	Parts per billion
mL	Milliliter
SU	Standard Unit
mV	Millivolts
mS	Milli Siemens
°C	Degrees Celsius
ft.	Feet
ATOC	Above top of casing.
AMSL	Above mean sea level.
NTU	Nephelometric Turbidity Unit.
P1	Performance monitoring event.
BL	Baseline event

Appendix B

Former Scott Aviation Area 1 Summary of VOCs in Groundwater

MONITORING WELL A1-GP02S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

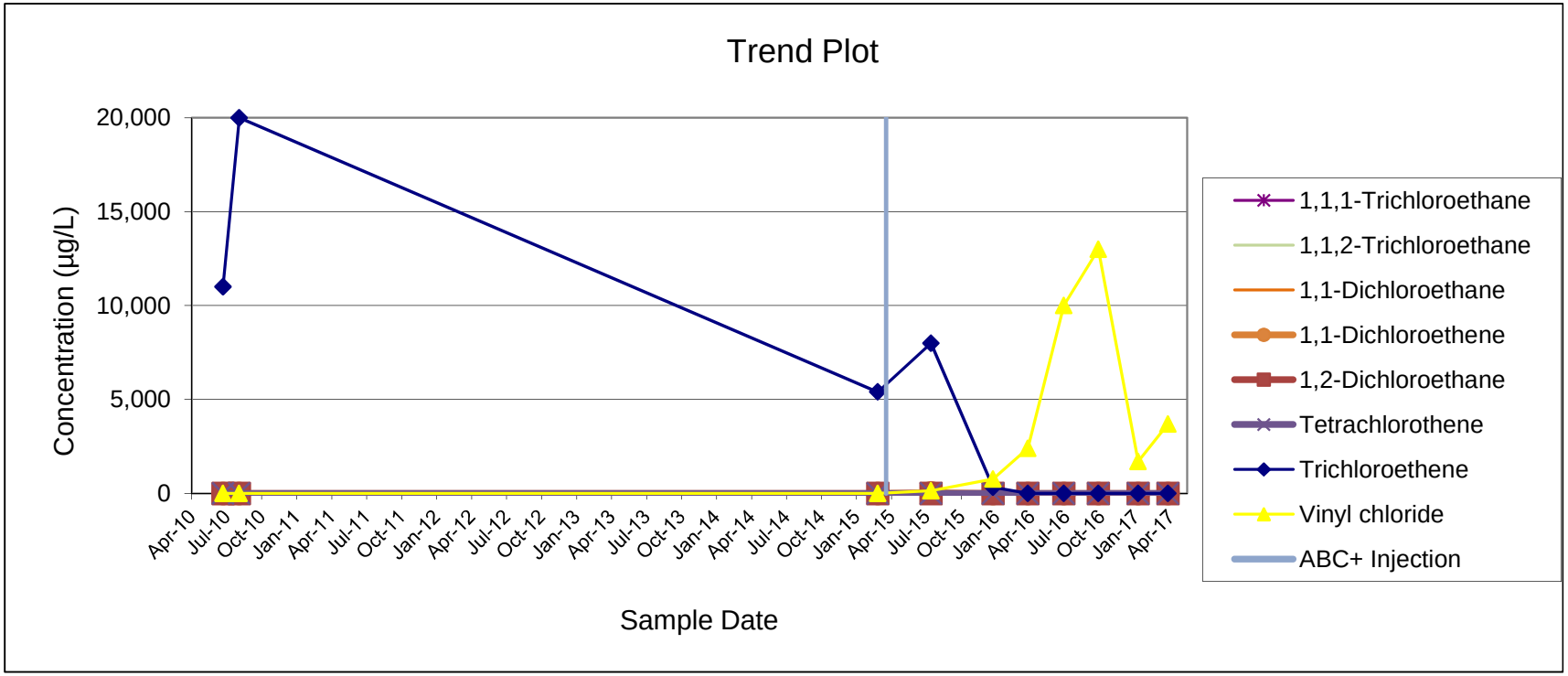
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/22/2010	ND	ND	ND	ND	ND	ND	11,000	ND
8/4/2010	ND	ND	ND	ND	ND	ND	20,000	ND
3/10/2015	ND	ND	ND	ND	ND	ND	5,400	ND
7/28/2015	ND	ND	ND	34	ND	ND	8,000	140
1/7/2016	ND	ND	ND	ND	ND	ND	330	770
4/8/2016	ND	ND	ND	ND	ND	ND	ND	2,400
7/11/2016	ND	ND	ND	ND	ND	ND	ND	10,000
10/10/2016	ND	ND	ND	ND	ND	ND	ND	13,000
1/23/2017	ND	ND	ND	ND	ND	ND	ND	1,700
4/11/2017	ND	ND	ND	ND	ND	ND	ND	3,700

MONITORING WELL A1-GP02S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL A1-GP06S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

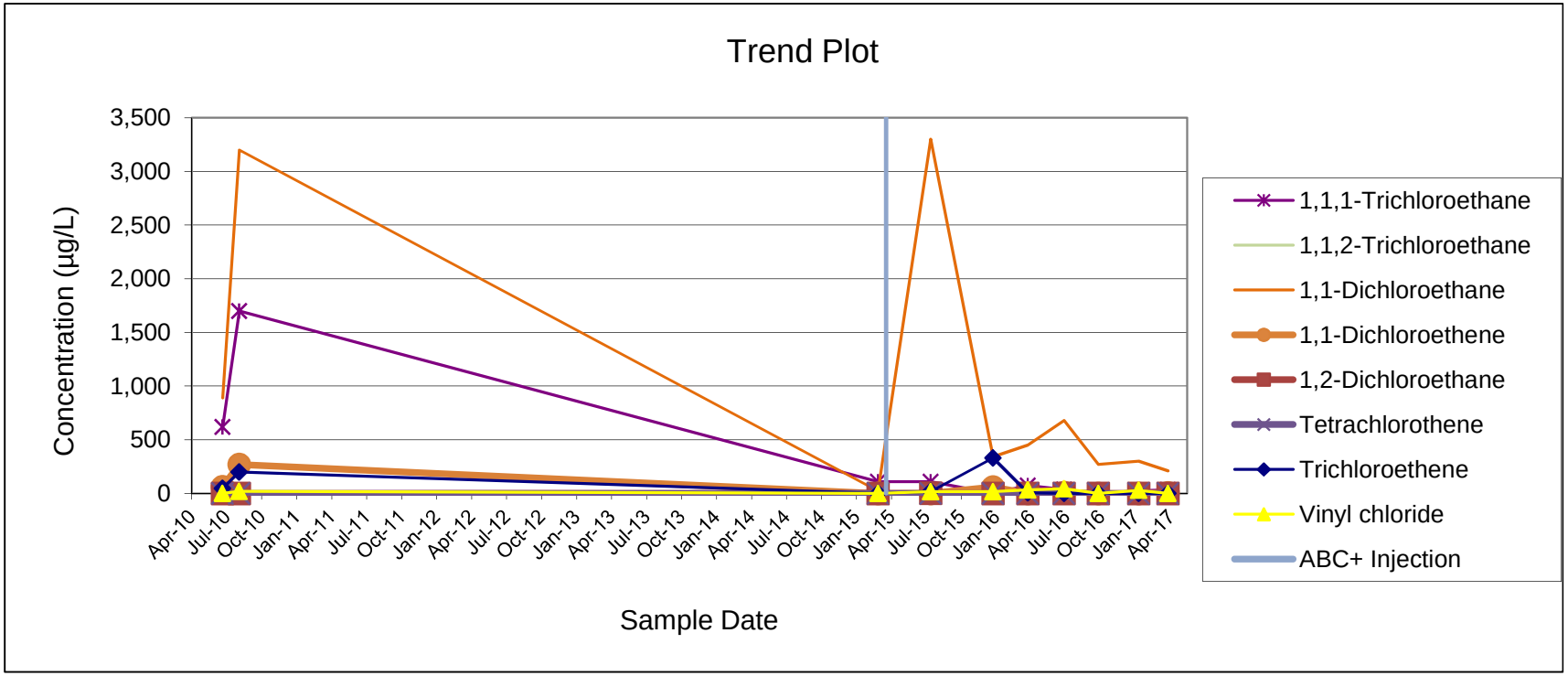
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/21/2010	620	ND	890	63	ND	ND	46	ND
8/4/2010	1,700	16	3,200	270	ND	ND	200	20
3/11/2015	110	ND	21	ND	ND	ND	0.81	ND
7/27/2015	110	4.1	3,300	0.89	3.1	ND	18	16
1/7/2016	ND	ND	340	60	ND	ND	330	16
4/8/2016	73	ND	450	ND	ND	ND	5.4	33
7/12/2016	35	ND	680	7.8	ND	ND	ND	44
10/10/2016	ND	ND	270	ND	ND	ND	ND	ND
1/24/2017	24	ND	300	ND	ND	ND	ND	29
4/11/2017	34	ND	210	6.2	ND	ND	ND	ND

MONITORING WELL A1-GP06S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL A1-GP10S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

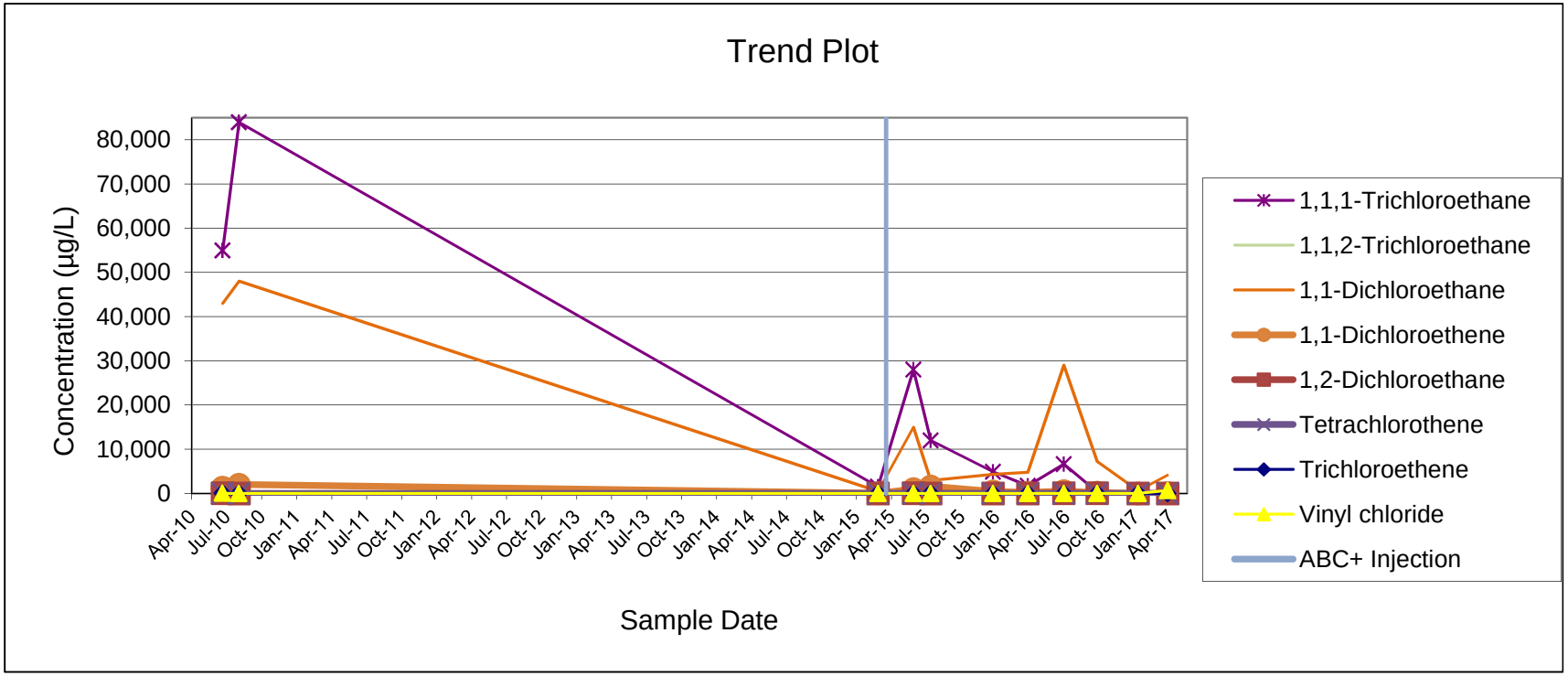
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/21/2010	55,000	84	43,000	1,300	77	1.2	92	41
8/3/2010	84,000	ND	48,000	2,000	ND	ND	ND	ND
3/11/2015	1,500	1.2	440	65	1.6	ND	6.6	ND
6/12/2015	28,000	ND	15,000	1,000	40	ND	ND	ND
7/27/2015	12,000	ND	2,900	1,600	9.6	ND	36	ND
1/7/2016	4,900	ND	4,300	470	ND	ND	ND	ND
4/8/2016	1,700	ND	4,800	220	ND	ND	ND	ND
7/11/2016	6,600	ND	29,000	500	72	ND	ND	ND
10/7/2016	360	ND	7,200	190	47	ND	ND	ND
1/23/2017	ND	ND	580	ND	ND	ND	ND	ND
4/10/2017	240	ND	4,100	45	ND	ND	ND	690

MONITORING WELL A1-GP10S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL A1-GP15S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

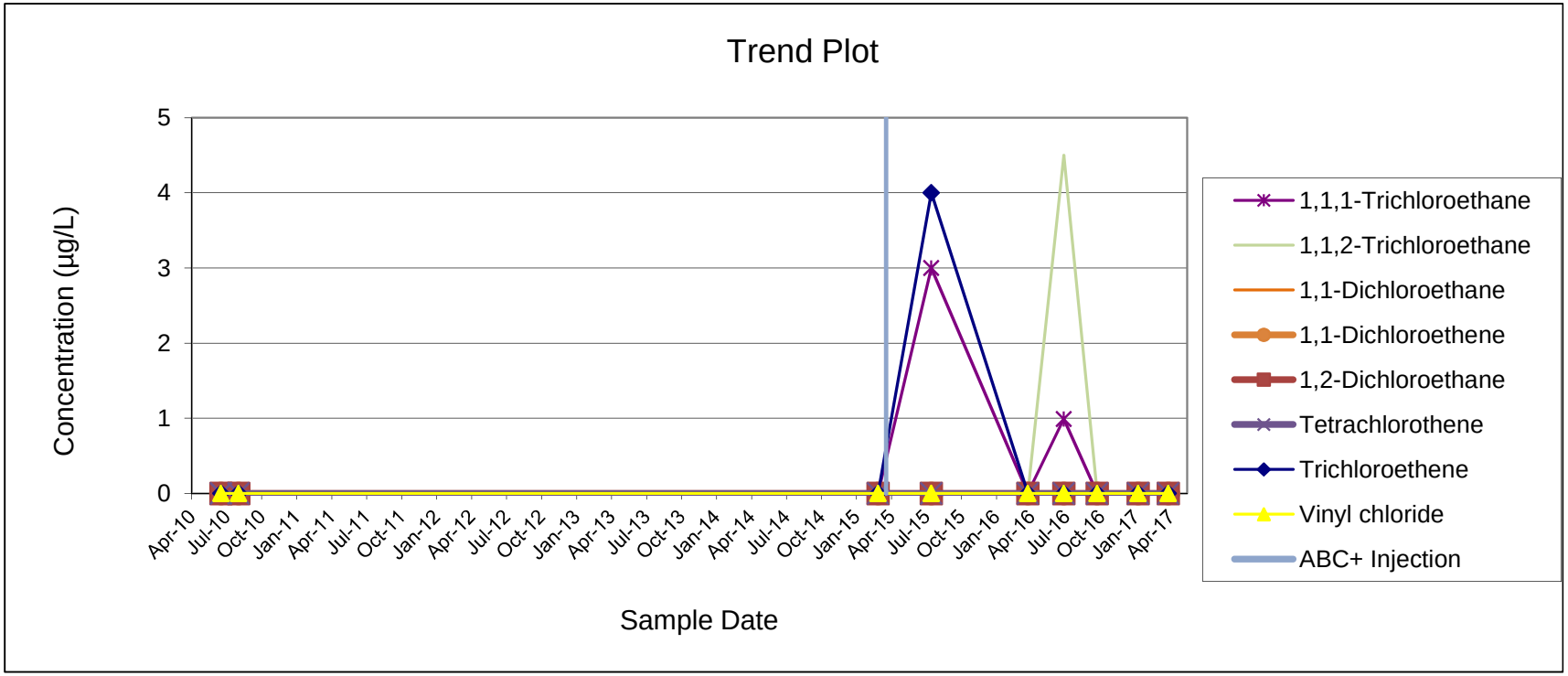
Sample Date	Analytical Results (µg/L)							
	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/17/2010	ND	ND	ND	ND	ND	ND	ND	ND
8/2/2010	ND	ND	ND	ND	ND	ND	ND	ND
3/11/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/29/2015	3	ND	ND	ND	ND	ND	4	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/11/2016	0.99	4.5	ND	ND	ND	ND	ND	ND
10/7/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/23/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/12/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL A1-GP15S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL A1-GP18S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

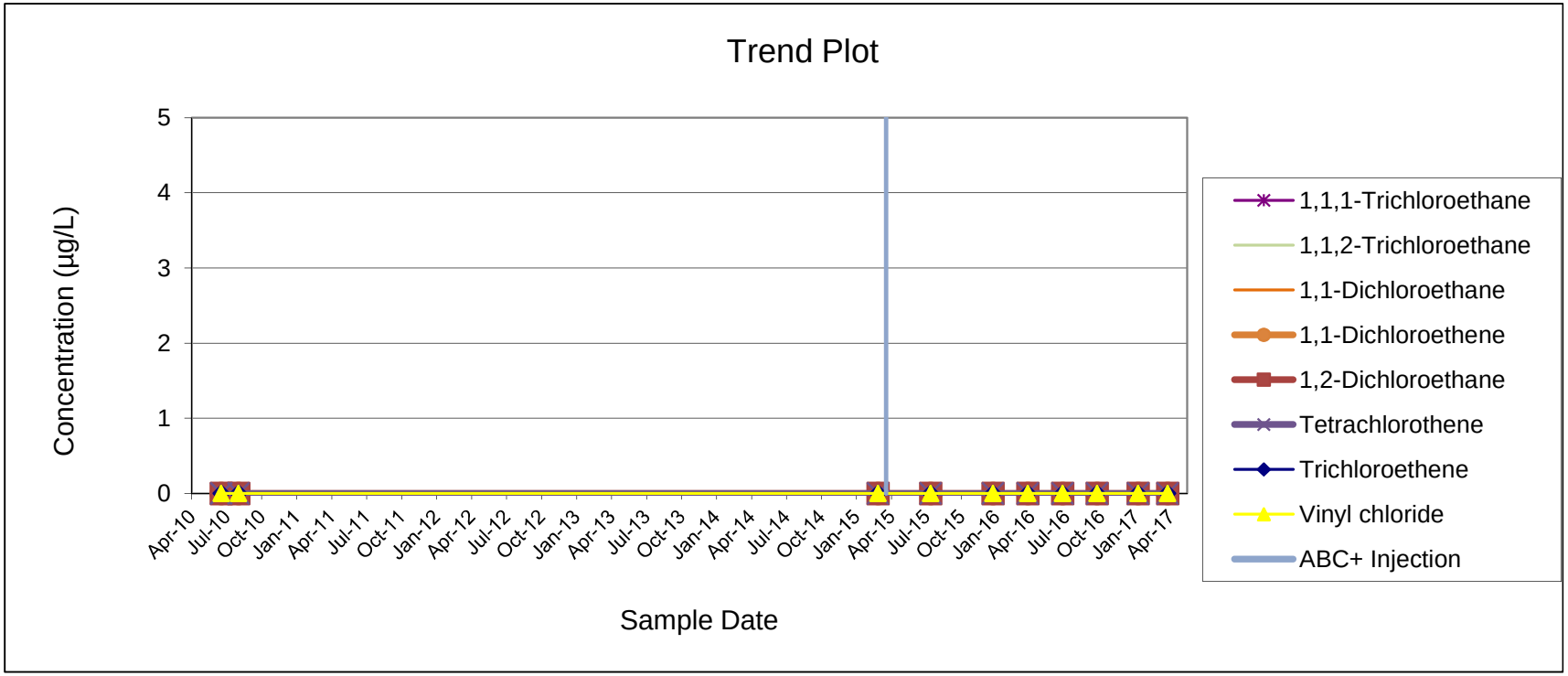
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/18/2010	ND	ND	ND	ND	ND	ND	ND	ND
8/2/2010	ND	ND	ND	ND	ND	ND	ND	ND
3/11/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/27/2015	ND	ND	ND	ND	ND	ND	ND	ND
1/7/2016	ND	ND	ND	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/7/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/23/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/10/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL A1-GP18S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-30
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

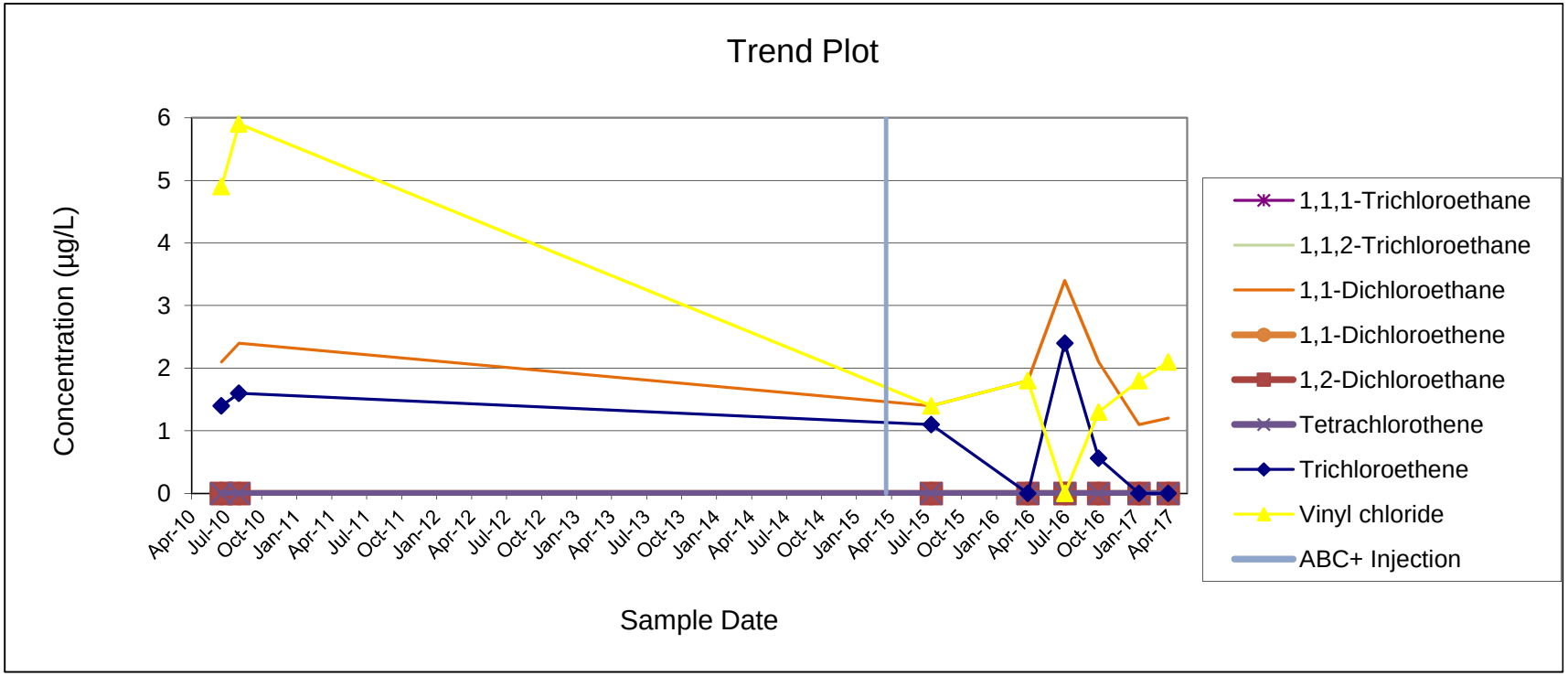
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/18/2010	ND	ND	2.1	ND	ND	ND	1.4	4.9
8/3/2010	ND	ND	2.4	ND	ND	ND	1.6	5.9
7/29/2015	ND	ND	1.4	ND	ND	ND	1.1	1.4
4/8/2016	ND	ND	1.8	ND	ND	ND	ND	1.8
7/14/2016	ND	ND	3.4	ND	ND	ND	2.4	ND
10/11/2016	ND	ND	2.1	ND	ND	ND	0.56	1.3
1/25/2017	ND	ND	1.1	ND	ND	ND	ND	1.8
4/12/2017	ND	ND	1.2	ND	ND	ND	ND	2.1

MONITORING WELL MW-30

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-35S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

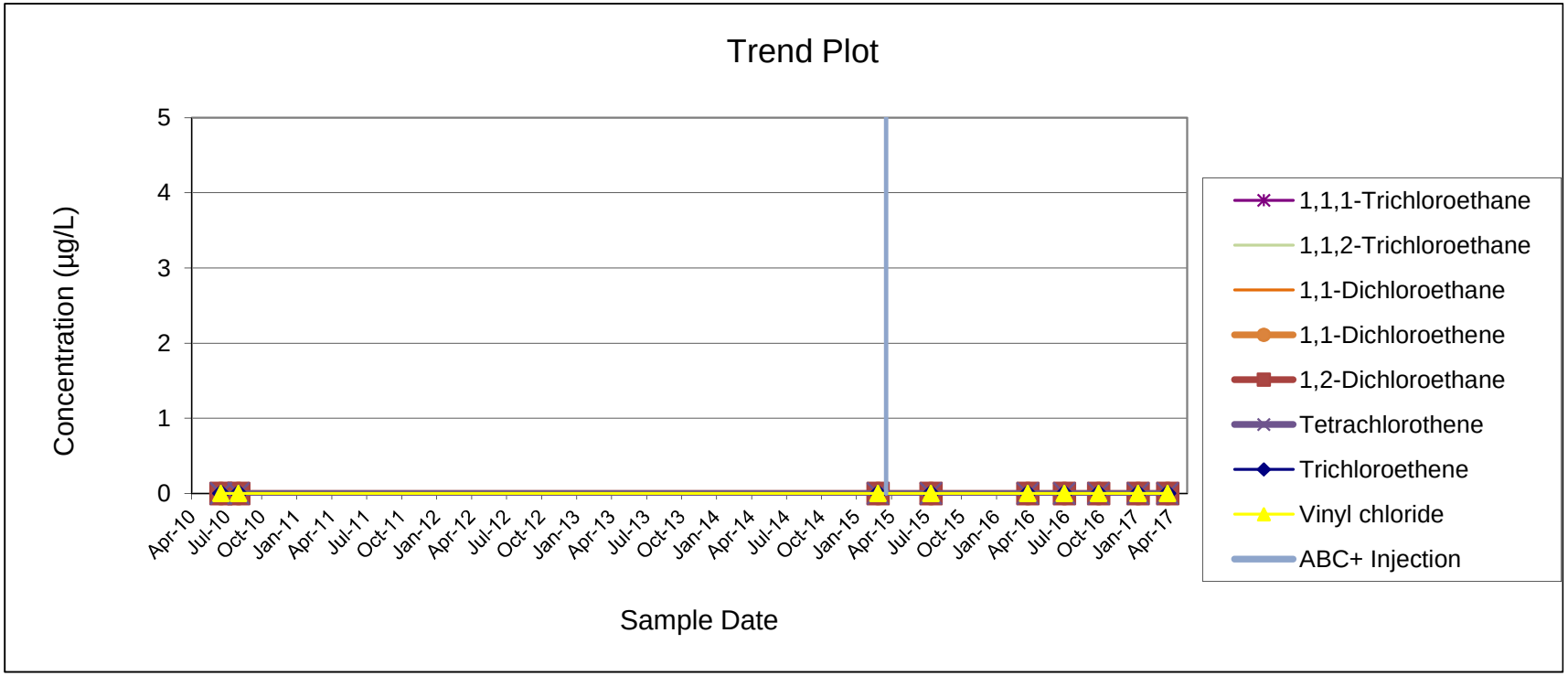
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/17/2010	ND	ND	ND	ND	ND	ND	ND	ND
8/2/2010	ND	ND	ND	ND	ND	ND	ND	ND
3/11/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/28/2015	ND	ND	ND	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/13/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/11/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/23/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/10/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-35S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-36S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

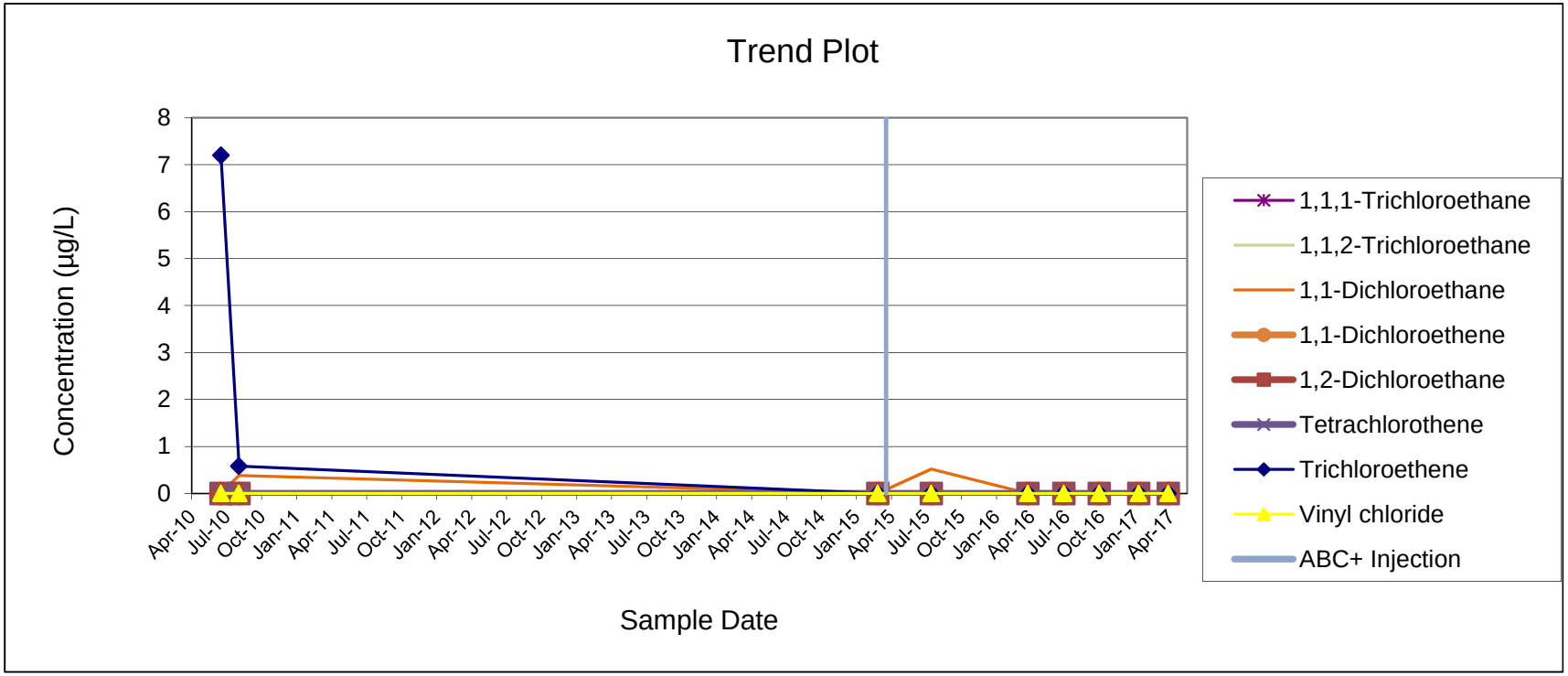
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/17/2010	ND	ND	ND	ND	ND	ND	7.2	ND
8/3/2010	ND	ND	0.38	ND	ND	ND	0.58	ND
3/10/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/29/2015	ND	ND	0.52	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/11/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/12/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/24/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/12/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-36S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-42S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

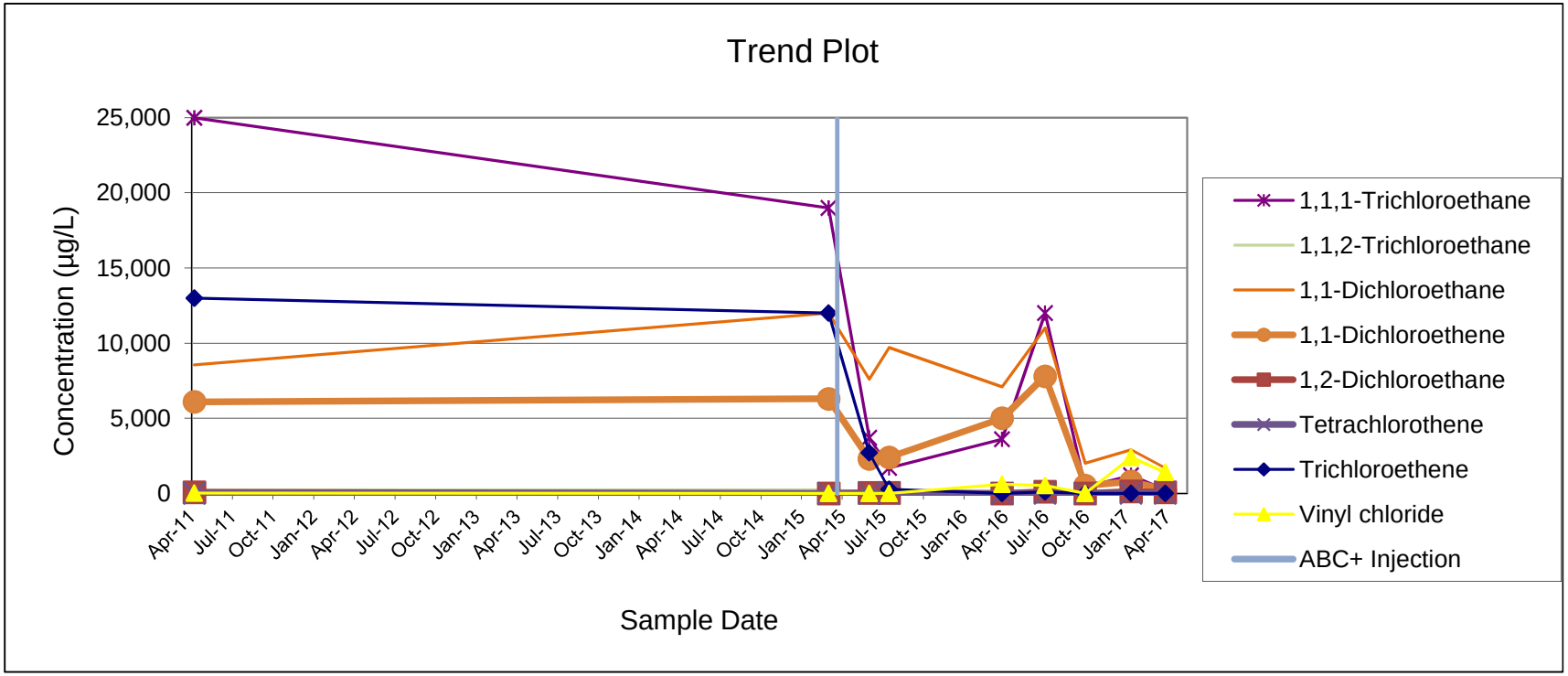
Sample Date	Analytical Results (µg/L)							
	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
4/7/2011	25,000	240	8,550	6,100	76	6	13,000	27
3/12/2015	19,000	240	12,000	6,300	ND	ND	12,000	ND
6/12/2015	3,700	100	7,600	2,300	44	ND	2,700	ND
7/27/2015	1,700	71	9,700	2,400	44	ND	280	ND
4/8/2016	3,600	ND	7,100	5,000	ND	ND	ND	610
7/14/2016	12,000	120	11,000	7,800	110	ND	100	530
10/13/2016	440	ND	2,000	520	ND	ND	ND	ND
1/25/2017	1,200	ND	2,900	790	130	ND	ND	2,400
4/12/2017	230	ND	1,700	220	74	ND	ND	1,400

MONITORING WELL MW-42S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-43S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

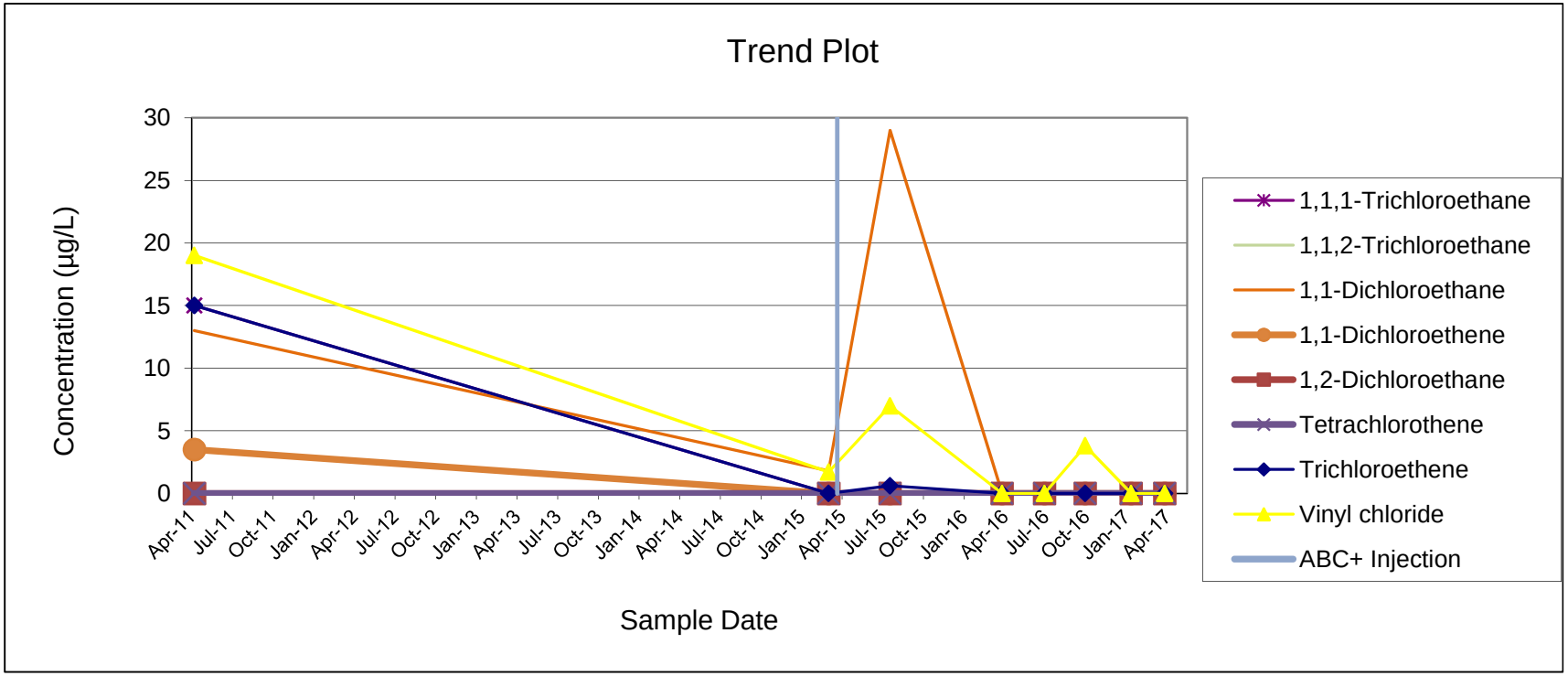
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
4/7/2011	15	ND	13	3.5	ND	ND	15	19
3/12/2015	ND	ND	1.8	ND	ND	ND	ND	1.7
7/29/2015	ND	ND	29	ND	ND	ND	0.60	7
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/13/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/13/2016	ND	ND	ND	ND	ND	ND	ND	3.8
1/25/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/11/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-43S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-44S
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

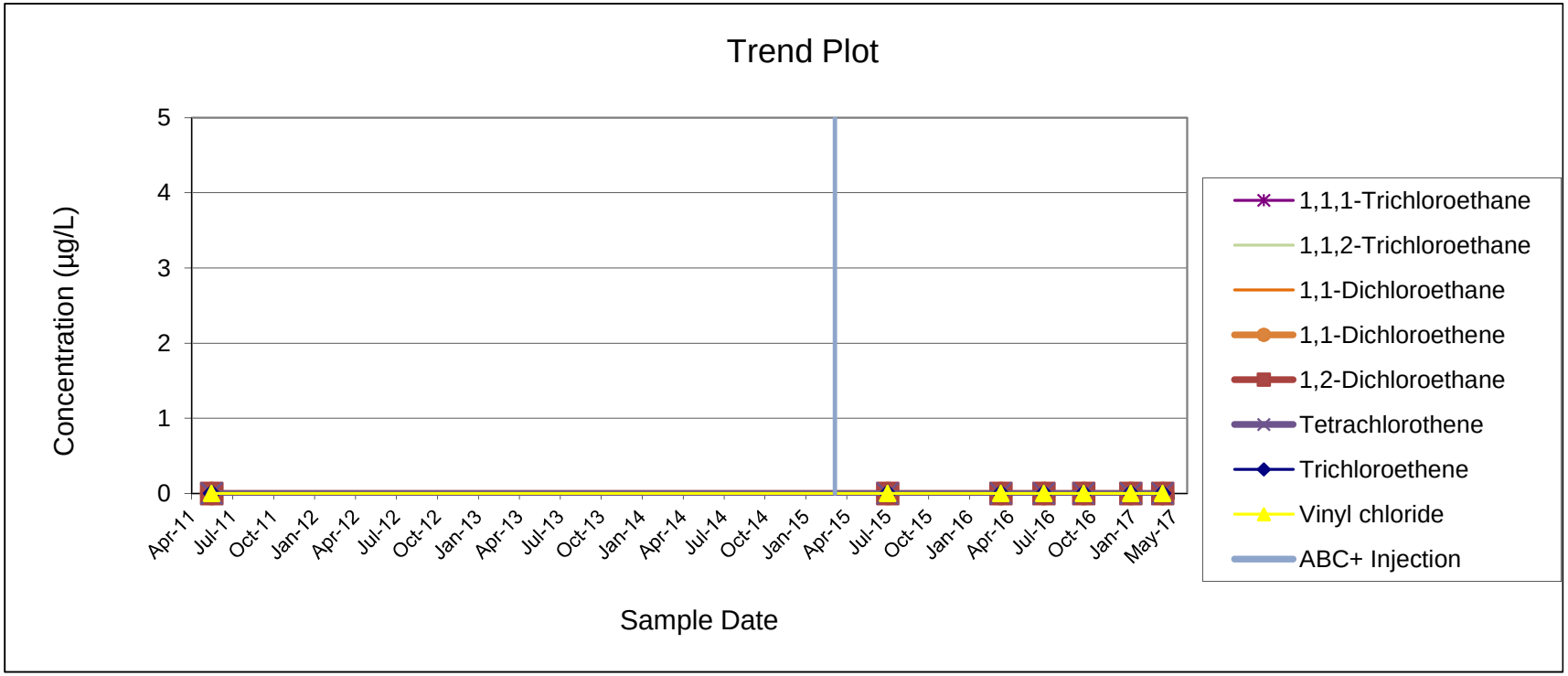
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/1/2011	ND	ND	ND	ND	ND	ND	ND	ND
7/29/2015	ND	ND	ND	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/14/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/11/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/25/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/7/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-44S

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-35D
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

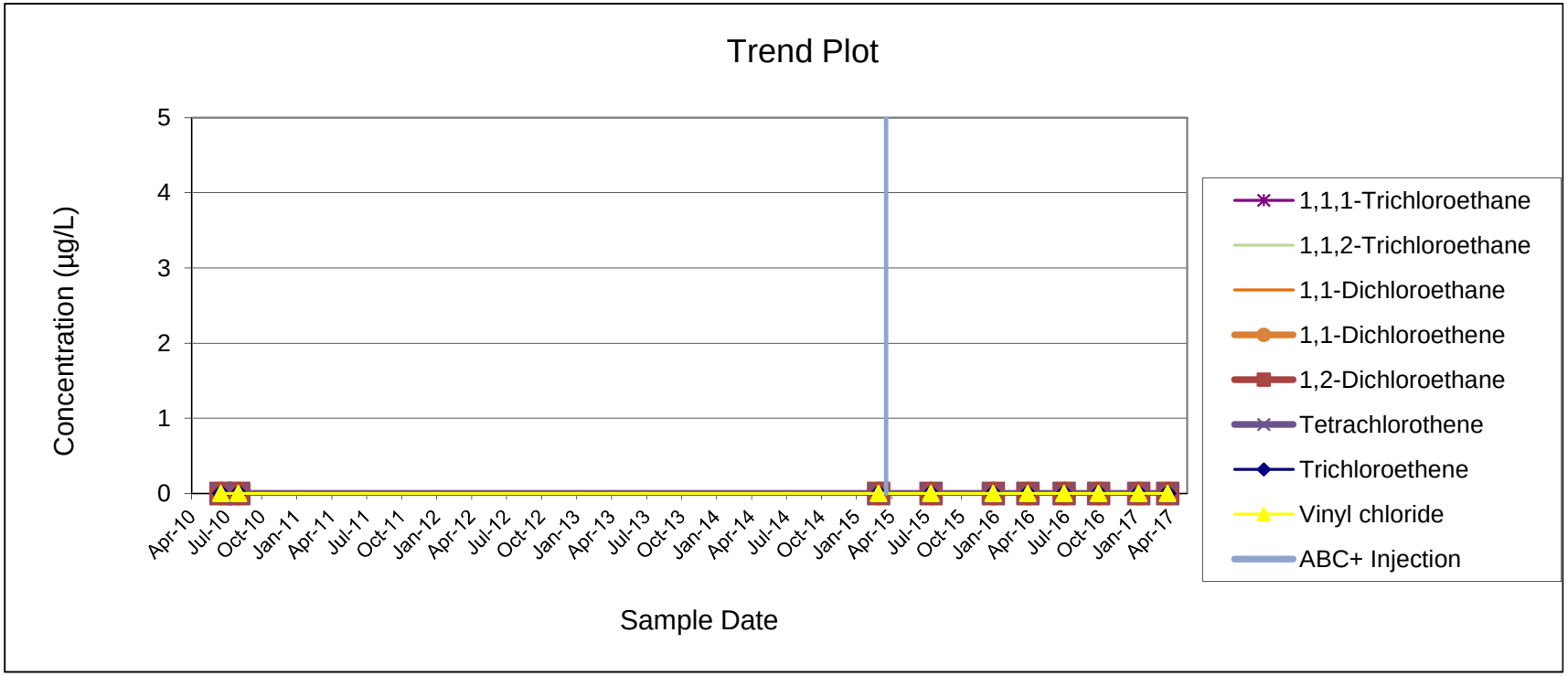
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/17/2010	ND	ND	ND	ND	ND	ND	ND	ND
8/2/2010	ND	ND	ND	ND	ND	ND	ND	ND
3/12/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/28/2015	ND	ND	ND	ND	ND	ND	ND	ND
1/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/12/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/11/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/24/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/10/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-35D

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-36D
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

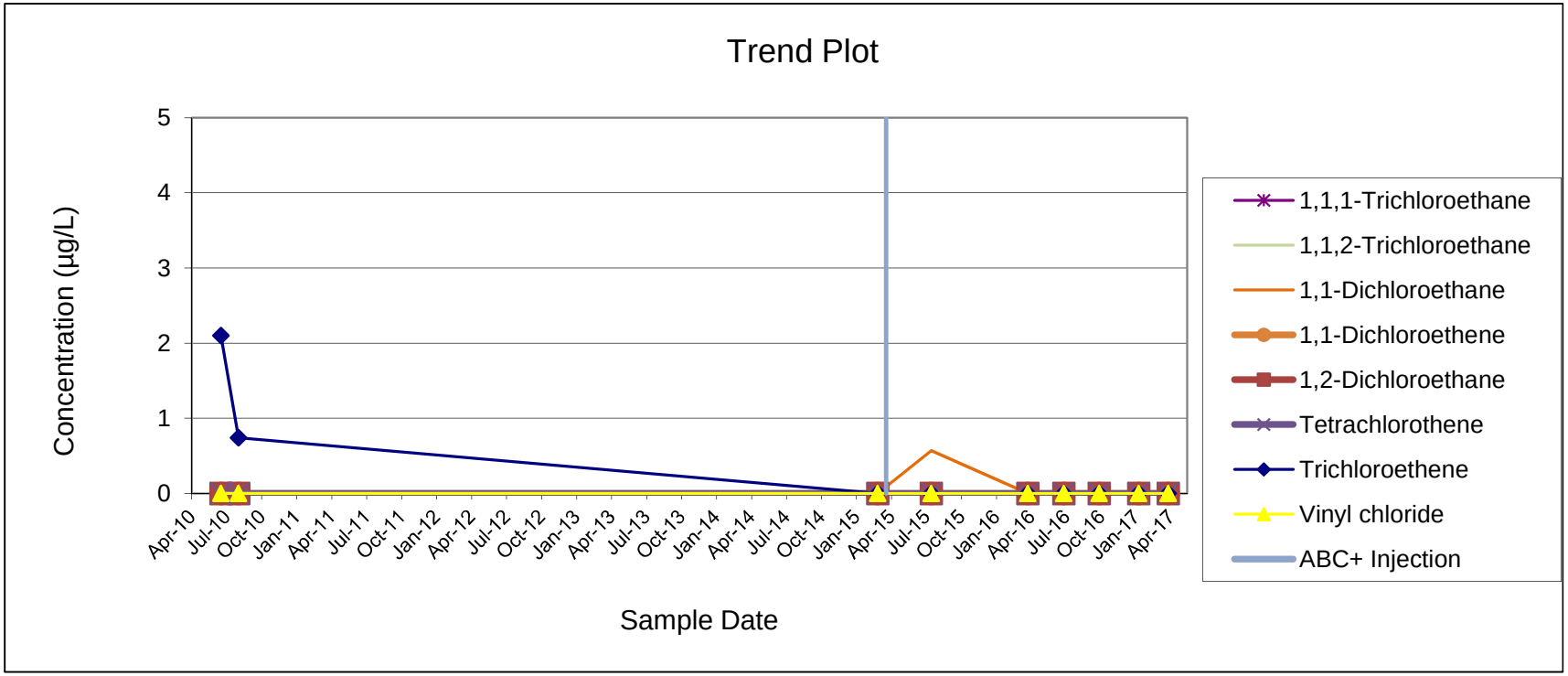
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/17/2010	ND	ND	ND	ND	ND	ND	2.1	ND
8/2/2010	ND	ND	ND	ND	ND	ND	0.74	ND
3/10/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/29/2015	ND	ND	0.57	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/11/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/12/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/24/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/12/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-36D

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-37D
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

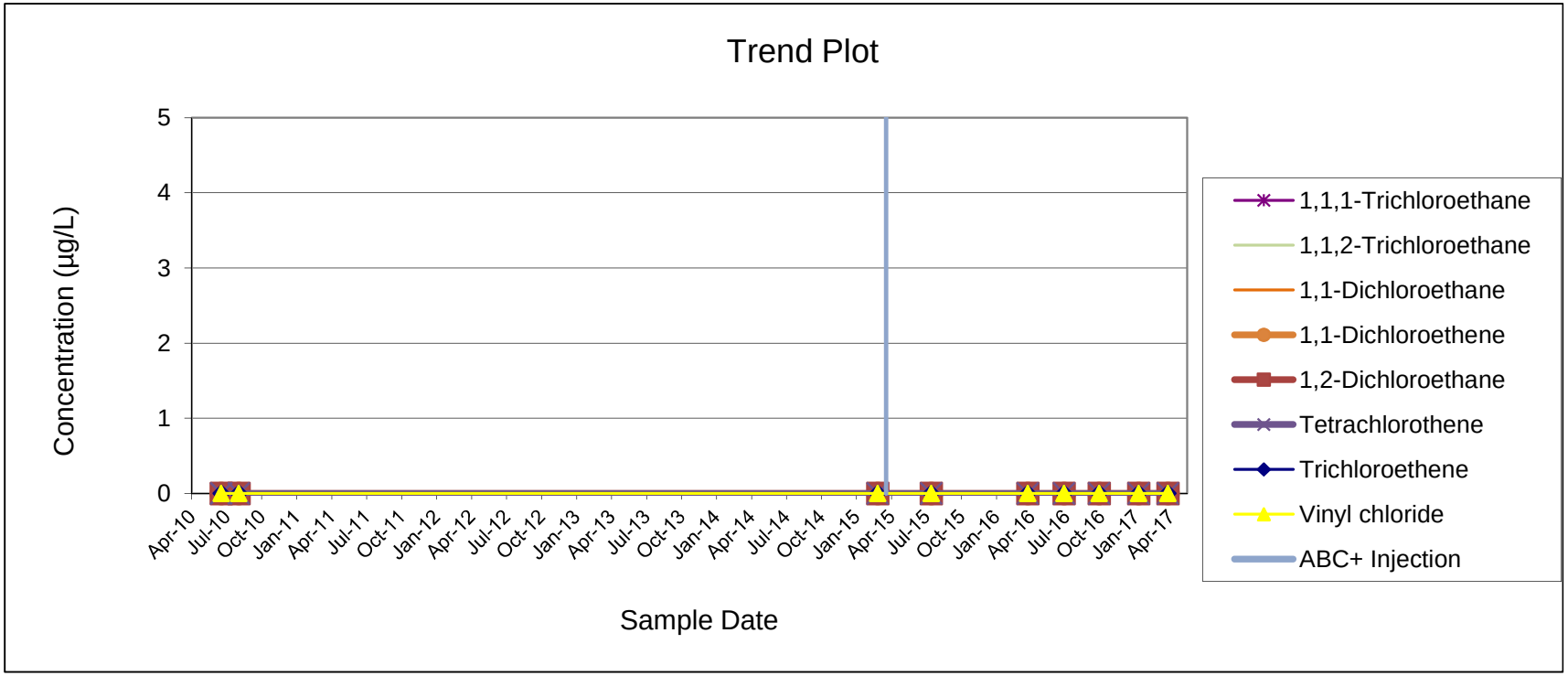
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/18/2010	ND	ND	ND	ND	ND	ND	ND	ND
8/3/2010	ND	ND	ND	ND	ND	ND	ND	ND
3/10/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/29/2015	ND	ND	ND	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/12/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/12/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/24/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/11/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-37D

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-38D
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

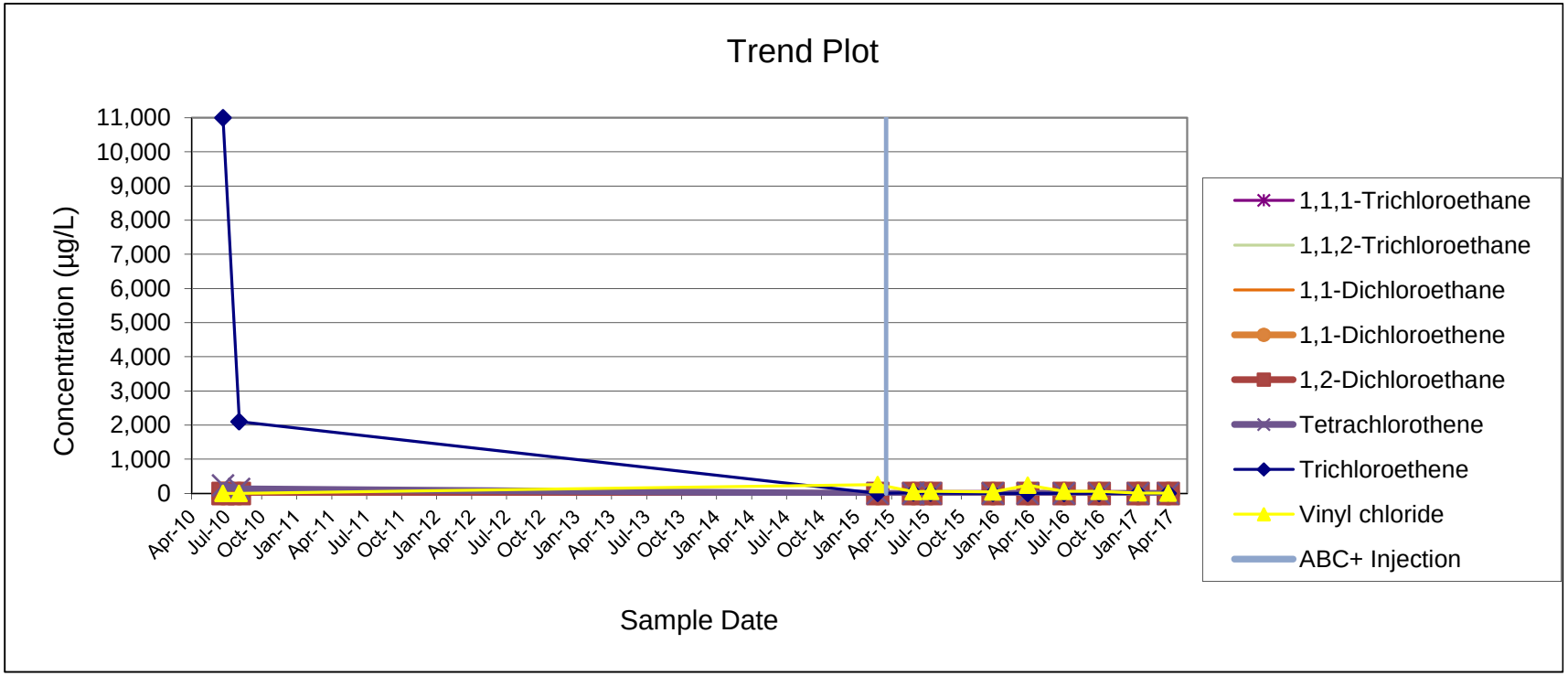
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/22/2010	ND	ND	ND	ND	ND	230	11,000	ND
8/4/2010	ND	ND	ND	ND	ND	130	2,100	ND
3/10/2015	ND	ND	ND	ND	ND	ND	1.9	260
6/12/2015	ND	ND	ND	ND	ND	ND	18	50
7/27/2015	ND	ND	ND	ND	ND	ND	6.8	60
1/7/2016	ND	ND	ND	ND	ND	ND	ND	44
4/8/2016	ND	ND	3.8	1.3	ND	ND	ND	240
7/12/2016	ND	ND	ND	ND	ND	ND	ND	59
10/12/2016	ND	ND	5.1	ND	ND	ND	ND	58
1/23/2017	ND	ND	ND	ND	ND	ND	ND	14
4/12/2017	ND	ND	2.1	ND	ND	ND	ND	6.7

MONITORING WELL MW-38D

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-39D
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

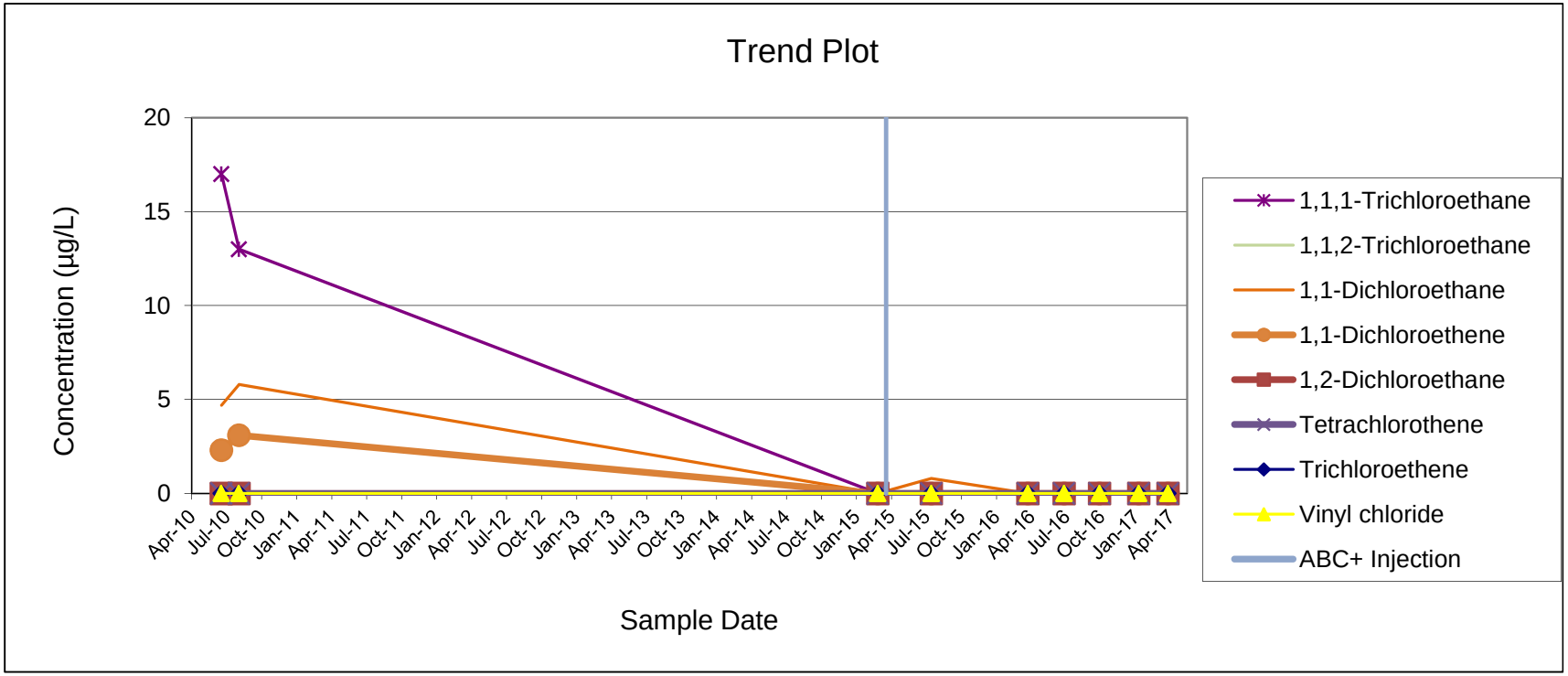
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/18/2010	17	ND	4.7	2.3	ND	ND	ND	ND
8/3/2010	13	ND	5.8	3.1	ND	ND	ND	ND
3/10/2015	ND	ND	ND	ND	ND	ND	ND	ND
7/29/2015	ND	ND	0.80	ND	ND	ND	ND	ND
4/8/2016	ND	ND	ND	ND	ND	ND	ND	ND
7/12/2016	ND	ND	ND	ND	ND	ND	ND	ND
10/13/2016	ND	ND	ND	ND	ND	ND	ND	ND
1/24/2017	ND	ND	ND	ND	ND	ND	ND	ND
4/11/2017	ND	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-39D

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



MONITORING WELL MW-40D
SUMMARY OF VOCs IN GROUNDWATER
Former Scott Aviation Site
Lancaster, New York

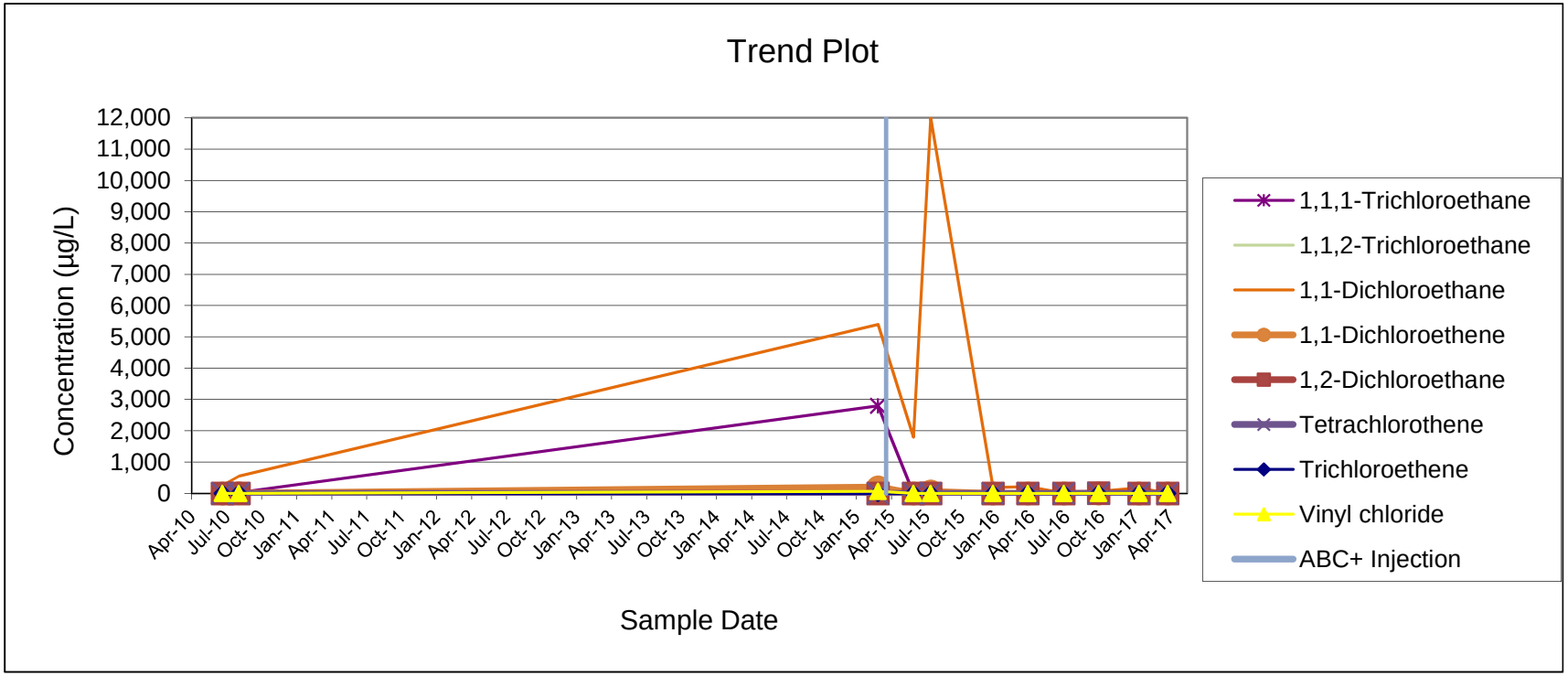
	Analytical Results (µg/L)							
Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Tetrachlorothene	Trichloroethene	Vinyl chloride
6/21/2010	23	ND	260	1.8	ND	ND	2.8	ND
8/3/2010	25	ND	550	6	ND	ND	ND	ND
3/11/2015	2,800	ND	5,400	200	ND	ND	ND	67
6/12/2015	ND	ND	1,800	ND	ND	ND	ND	ND
7/27/2015	ND	ND	12,000	64	ND	ND	ND	ND
1/7/2016	ND	ND	190	ND	ND	ND	ND	ND
4/8/2016	ND	ND	220	ND	ND	ND	ND	ND
7/11/2016	ND	ND	12	ND	ND	ND	ND	ND
10/11/2016	ND	ND	71	ND	5.2	ND	ND	ND
1/25/2017	ND	ND	180	ND	4.8	ND	ND	ND
4/10/2017	43	ND	ND	ND	ND	ND	ND	ND

MONITORING WELL MW-40D

SUMMARY OF VOCs IN GROUNDWATER

Former Scott Aviation Site

Lancaster, New York



Appendix C

Institutional Controls and Engineering Controls Certification Form

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. C915233

Site Name Former Scott Aviation Facility (Area 1)

Site Address: 215 and 221 Erie Street Zip Code: 14086
City/Town: Lancaster
Site Address: 225 Erie Street
County: Erie
Site Acreage: 1.3 **Site Acreage:**
1.25 acres
Reporting Period: December 29, 2015 to April 01, 2017

Reporting Period: December 29, 2015 to April 12, 2017

	YES	NO
1. Is the information above correct?	☐	X
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	X	☐
7. Are all ICs/ECs in place and functioning as designed?	X	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

6/21/2017
Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	X
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	X	☐

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C915233

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
104.16-5-8	AVOX Systems, Inc.	Ground Water Use Restriction Landuse Restriction Site Management Plan Soil Management Plan Monitoring Plan IC/EC Plan

An Environmental Easement was filed with the Erie County Clerk's Office on November 19, 2015. The Controlled Property may be used for commercial and industrial use as long as the following long-term institutional controls are employed: (1) restrict the use of site groundwater as a source of potable or process water without necessary water quality treatment as determined by the NYSDOH or Erie County Department of Health; (2) all future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the Site Management Plan; and (3) monitoring to assess the performance and effectiveness of the remedy must be conducted as defined in the Site management Plan.

104.16-5-9	AVOX Systems, Inc.	Soil Management Plan Monitoring Plan IC/EC Plan Ground Water Use Restriction Landuse Restriction Site Management Plan

An Environmental Easement was filed with the Erie County Clerk's Office on November 19, 2015. The Controlled Property may be used for commercial and industrial use as long as the following long-term institutional controls are employed: (1) restrict the use of site groundwater as a source of potable or process water without necessary water quality treatment as determined by the NYSDOH or Erie County Department of Health; (2) all future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the Site Management Plan; and (3) monitoring to assess the performance and effectiveness of the remedy must be conducted as defined in the Site management Plan.

Box 4

Description of Engineering Controls

None Required

Not Applicable/No EC's

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) 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 is accurate and compete.

YES	NO
X	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) 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;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

6/21/2017
Date

IC CERTIFICATIONS
SITE NO. C915233

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 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 Troy L. Chute at 34407 Dupont Blvd, Suite 6 Frankford, DE
print name print business address

am certifying as Scott Figgie LLC (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

6/21/2017
Date

IC/EC CERTIFICATIONS

Box 7

Signature

I certify that all information in Boxes 4 and 5 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 Mark E. Lang, P.E, BCEE (print name) at AECOM, 257 West Genesee St., Buffalo, NY 14202 (print business address),

am certifying as a for the Remedial Party (Owner or Remedial Party)

STATE OF NEW YORK
MARK E. LANG
LICENSED PROFESSIONAL ENGINEER
074013

6/23/17

Signature of , for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

Date