FINAL

BUILDING 817/WEAPONS STORAGE AREA SUPPLEMENTAL INVESTIGATION REPORT FORMER GRIFFISS AIR FORCE BASE ROME, NEW YORK

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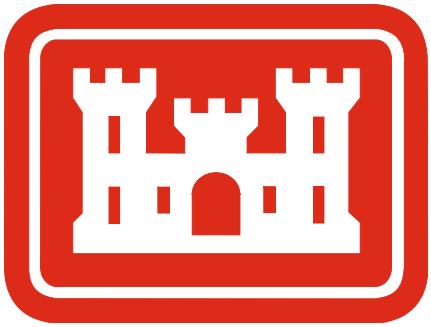

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ABBREVIATIONS AND ACRONYMS

µg/kg	Microgram(s) Per Kilogram
µg/L	Microgram(s) Per Liter
AFB	Air Force Base
AFRPA	Air Force Real Property Agency
AMSL	Above Mean Sea Level
AOC	Area of Concern
bgs	Below Ground Surface
B817	Building 817
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cis-1,2-DCE	cis-1,2-dichloroethene
CSM	Conceptual Site Model
CVOC	Chlorinated Volatile Organic Compound
DFAS	Defense Finance and Accounting Service
EAB	Enhanced anaerobic bioremediation
EADS	Eastern Air Defense Sector
E&E	Ecology and Environment
EEEPC	Ecology and Environment Engineering, P.C.
FFA	Federal Facilities Agreement
FPM	FPM Group, Inc.
ft/day	Feet Per Day
ft/ft	Foot Per Foot
GAFB	Griffiss Air Force Base
GC/MS	Gas Chromatography/Mass Spectometry
IRP	Installation Restoration Program
ISCO	*In Situ* Chemical Oxidation
MH	Manhole
MNA	Monitored Natural Attenuation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MIP	Membrane Interface Probe
mL	Milliliter(s)
NA	Not Applicable
NELAP	National Environmental Laboratory Accreditation Program
NYANG	New York Air National Guard
NYLD	New York Leak Detection, Incorporated
NYSDEC	New York State Department of Environmental Conservation
OPS	Operating Properly and Successfully

LIST OF ACRONYMS
(Continued)

PDI	Pre-Design Investigation
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
ROD	Record of Decision
SAC	Strategic Air Command
SI	Supplemental Investigation
SIM	Selective Ion Monitoring
SOP	Standard Operating Procedure
SP22	Screen Point 22
Stone	Stone Environmental, Incorporated
TCE	Trichloroethene
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
WSA	Weapons Storage Area

EXECUTIVE SUMMARY

A Supplemental Investigation (SI) was completed at the Building 817 (B817)/Weapons Storage Area (WSA) site with the overall goal of providing a better understanding of the effectiveness of the remedy in place and facilitating a decision on whether pursuit of an Operating Properly and Successfully (OPS) determination is an appropriate next step. The specific objectives of this SI were to: (1) provide detailed chemistry data regarding the chlorinated volatile organic compound (CVOC) source location near Building 817, (2) provide high resolution characterization of the thin, fine-grained stratigraphic layer identified during a previous investigation, and (3) assess whether a secondary CVOC source exists downgradient of the existing vegetable oil injection wells. A Geoprobe® was used to rapidly collect closely-spaced soil and groundwater samples at varying depths along multiple transects across the CVOC plume, with detailed core logging and rapid analysis of samples in a mobile, onsite laboratory. Additionally, information was collected on the building drains, sump, and utilities at and near B817.

The B817/WSA site is located on the north side of the main runway between B817 and the culverted section of Six Mile Creek south of the former WSA. B817, constructed in the 1950s, was once used for electronics parts maintenance, and the solvents trichloroethene (TCE) and tetrachloroethene (PCE) were used in small quantities at this location.

The primary contaminants in groundwater exceeding New York State Department of Environmental Conservation (NYSDEC) Class GA Groundwater Standards are TCE and PCE. Site groundwater migrates southwest toward the culverted section of Six Mile Creek. The contaminated water-bearing zone is composed of relatively uniform fine sand and silty sand that begins at approximately five feet below ground surface (bgs) and extends to a thin layer of glacial deposits (fine-grained silt and clay with lenses of sand) overlying shale bedrock at approximately 20 to 25 feet bgs. The remedy for B817 provided in the Record of Decision is enhanced bioremediation to remove CVOCs from site groundwater, followed by monitored natural attenuation (MNA); the cleanup goals for the site are NYSDEC Class GA Groundwater Quality Standards.

The B817 evaluation conducted in July 2014 included a smoke test of the 1.5-inch sump discharge line from the sump located in the center south portion of B817. During the test, smoke was observed coming from three floor drains within the building. Smoke was not observed coming from the ground or any other location outside B817. Therefore, the results of the smoke test were inconclusive in that the subsurface route of the sump drain was not determined.

A total of 106 soil samples and 22 groundwater samples were collected in August 2014. The SI results show that soil and groundwater CVOC concentrations have decreased within the bioremediation treatment zone, and maximum groundwater concentrations have decreased downgradient of the treatment zone. However, CVOC concentrations remain elevated relative to the treatment area both downgradient and sidegradient of the treatment area. Smaller-scale site features identified during the SI may exert significant control over contaminant fate and transport. These features, which were not previously recognized during installation and sampling of conventional monitoring wells and soil borings, include variations in soil type and grain size (i.e., subsurface heterogeneities) that cause contaminant concentrations to vary substantially over small distances and to be highly localized. Concentration profiles indicate that PCE/TCE mass is

sorbed in fine-grained (silt/clay) material underlying the primary transmissive (sandy) zone. Over time the sorbed CVOCs diffuse out of the finer-grained units into the transmissive zone, thereby contributing to plume persistence. The observations made during this SI indicate the site has a late stage, mature plume, consistent with back diffusion as the primary remaining source.

The low CVOC concentrations directly surrounding the vegetable oil injection area support that the remedy (enhanced bioremediation) is operating properly, and is protective of human health and the environment. Continued use of MNA with institutional controls will eventually achieve cleanup goals. Therefore, proceeding with an OPS determination is recommended.

It is also recommended that the conceptual site model (CSM) be updated with the additional site data obtained during the SI. The additional data include higher CVOC concentrations sidegradient (northwest) of the treatment area, as well as stratigraphic and hydrogeologic heterogeneities including lower permeability deposits ubiquitous throughout the SI area. Analytical modeling will be used to determine the value of additional active remediation.

Finally, an additional site investigation is recommended to further delineate the northwest portion of the contaminated area. The additional investigation is expected to include further direct push sampling of soil and groundwater and installation of at least one additional monitoring well.

SECTION 1

INTRODUCTION

1.1 GRIFFISS AIR FORCE BASE

The former Griffiss Air Force Base (GAFB) is located in Oneida County, New York, in the City of Rome. The base property covers approximately 3,540 acres and is situated in the relatively broad valley of the Mohawk River at an elevation of 504 feet above mean sea level (AMSL) **(Figure 1-1**).

GAFB, originally named Rome Air Depot, was activated on February 1, 1942, with the mission of storage, maintenance, and shipment of material for the U.S. Army Air Corps. Upon creation of the Air Force in 1947, the depot was renamed Griffiss Air Force Base. The base became an electronics center in 1950, with the transfer of Watson Laboratory Complex. This complex was subsequently known as Rome Air Development Center [1951], Rome Laboratory, and then the Air Force Research Laboratory Information Directorate, established with the mission of accomplishing applied research, development, and testing of electronic airground systems. The 49th Fighter Interceptor Squadron was also added. The Headquarters of the Ground Electronics Engineering Installations Agency was added in June 1958 to engineer and install ground communications equipment throughout the world. On July 1, 1970, the 416th Bombardment Wing of the Strategic Air Command (SAC) was activated with the mission of maintenance and implementation of both effective air refueling operations and long-range bombardment capability (Air Force Real Property Agency [AFRPA], 2009).

GAFB was designated for realignment under the Base Realignment and Closure (BRAC) Act in 1993 and 1995, resulting in deactivation of the 416th Bombardment Wing in September 1995. The Air Force Research Laboratory Information Directorate and the Eastern Air Defense Sector (EADS) will continue to operate at their current locations. The New York Air National Guard (NYANG) operated the runway for the 10th Mountain Division deployments until October 1998, when they were relocated to Fort Drum, and the Defense Finance and Accounting Service (DFAS) has established an operating location at the former GAFB (AFRPA, 2009).

On July 22, 1987, the base was listed on the United States Environmental Protection Agency (USEPA) National Priority List, which brought the installation under the federal facilities provisions of Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). In August 1990, the Air Force, USEPA, and the New York State Department of Environmental Conservation (NYSDEC) entered into a Federal Facilities Agreement (FFA) for environmental remediation at a number of sites at the former GAFB (AFRPA, 2009). On March 20, 2009, 2,897.2 acres were deleted from the NPL. The focus of this report, Building 817 (B817)/Weapons Storage Area (WSA), is within the 655 acres remaining on the NPL.

1.2 BUILDING 817/WEAPONS STORAGE AREA

The B817/WSA site is located on the north side of the main runway between B817 and the culverted section of Six Mile Creek south of the former WSA. B817, constructed in the 1950s,

was once used for electronics parts maintenance, and the solvents trichloroethene (TCE) and tetrachloroethene (PCE), both chlorinated volatile organic compounds (CVOCs), were used in small quantities at this location. The Installation Restoration Program (IRP) Site number is SD-52-05.

Site groundwater migrates southwest from the B817 area within a surficial water-bearing zone consisting primarily of unconsolidated sand and silty sand toward the culverted section of Six Mile Creek. The primary contaminants in groundwater samples exceeding NYSDEC Class GA Groundwater Standards are TCE and PCE. The B817 Site Plan is provided in **Figure 1-2**.

1.3 PURPOSE AND OBJECTIVES

The primary objectives of this Supplemental Investigation (SI) were to: (1) provide additional information about the CVOC source location near B817, and (2) determine if a secondary CVOC source exists downgradient of the existing line of substrate injection points. Additionally, information was collected on the drains, sump, and utilities at and near B817. SI activities included a building evaluation and a direct push investigation. The direct push investigation included the use of a Geoprobe® to rapidly collect closely-spaced soil and groundwater samples at varying depths along multiple transects across the plume with detailed core logging and rapid analysis of samples in a mobile, onsite laboratory to guide the sampling program according to pre-determined decision logic. The purpose of the investigation was to provide a more detailed understanding of the source area, identify variations in CVOC concentrations with depth and soil type, and support future remedial decisions for the Site.

1.4 REPORT ORGANIZATION

This Supplemental Investigation Report is organized in six sections and four appendices:

- **Section 1 – Introduction**
- **Section 2 – Background Information**
- **Section 3 – Supplemental Investigation Activities**
- **Section 4 – Results of Supplemental Investigation**
- **Section 5 – Conclusions and Recommendations**
- **Section 6 – References**
- **Appendix A – Boring Logs**
- **Appendix B – Laboratory Data**
- **Appendix C – Daily Field Reports**
- **Appendix D – Building 817/WSA Predesign Investigation Map**

SECTION 2

BACKGROUND INFORMATION

2.1 PREVIOUS INVESTIGATIONS

2.1.1 Remedial Investigation (1994)

TCE was initially detected in groundwater from downgradient well LAWMW-9 (7.6 micrograms per liter [µg/L]) during the Remedial Investigation (RI) in 1994 (Law Engineering and Environmental Services, 1996), indicating that there could be a source of contamination in this area. The well location is shown in **Figure 1-2**.

2.1.2 Supplemental Investigations (1998 and 2000)

An SI (Ecology & Environment, Inc. [E&E], 1998) was subsequently performed in 1997 in which three temporary monitoring wells were installed around well LAWMW-9. An additional SI was conducted in 2000 to complete the lateral and vertical delineation of the contaminant plume (E&E, 2001). This investigation included collecting 56 Geoprobe® groundwater grab samples at 36 locations; 13 of the 36 locations were vertically profiled.

2.1.3 Bedrock Groundwater Study (2002)

A bedrock groundwater study for Building 817/WSA conducted in 2002 (E&E, 2002) consisted of the installation of three new bedrock wells (WSA-MW12Br, WSA-MW13Br, and WSA-MW14Br), as well as one new overburden monitoring well. The bedrock groundwater study concluded that groundwater contamination observed in the overlying overburden aquifer did not appear to have migrated downward into the underlying bedrock at the site.

2.1.4 Treatability Study Pilot Test (2002-2004)

Based on the results of groundwater sampling performed in 2000, the area in the vicinity of monitoring well WSA-MW11 was selected to conduct an *in situ* chemical oxidation (ISCO) pilot study (E&E, 2004). This area exhibited elevated groundwater concentrations, and was believed to represent a significant portion of the total contaminant mass in the plume. Four injection wells were installed to target the contaminant zone (approximately 10 to 20 feet below ground surface [bgs]). During the pilot-scale program at B817/WSA, a total of approximately 8,000 gallons of 0.6% potassium permanganate was injected in 2002, and follow-up monitoring was performed into 2004. Overall, the pilot test results suggested that ISCO may be a viable treatment option for the CVOC plume at the site, though there may be possible preferential pathways in the subsurface, as indicated by the rapid migration of oxidant from the injection array to WSA-MW15.

2.1.5 Pre-Design Investigation (2006)

A pre-design investigation (PDI) using a Geoprobe®-mounted Membrane Interface Probe (MIP) was performed in October 2006 to better define the suspected contaminant source area near B817 (E&E, 2007). Twenty-two MIP borings were advanced from just north of Perimeter

Road to approximately 150 feet northeast of B817. The MIP borings were located north (hydraulically upgradient) of B817, near the southwest corner of B817 in the vicinity of an unlined sump along the south wall of B817 that was a suspected collection/disposal point for fluids, and southwest (hydraulically downgradient) of B817 along an underground utility corridor that was a suspected preferential contaminant migration pathway. Each boring was advanced to refusal, which occurred at depths of 14 to 27 feet bgs. Permanent monitoring well MW-001 was installed approximately 10 feet upgradient (northeast) of MIP location M1 where high concentrations of CVOCs were detected in 2006 (see **Figure 1-2**). **Appendix D** provides a large-scale map of the PDI as a reference.

Based on historical groundwater quality data, MIP data, and confirmatory soil sample results, it was concluded that a contaminant source area was not present in the area north of B817. Similarly, the MIP investigation near the downgradient utility corridor extending to the southwest from B817 did not detect the presence of CVOCs at levels that would indicate a source soil in the saturated or unsaturated zones. Because of elevated MIP readings near the southwest corner of B817 at a depth of 15 to 16 feet bgs, one soil and one groundwater sample were collected at that location and depth. The soil sample analysis detected 100 micrograms per kilogram (µg/kg) TCE and the water sample contained 200 µg/L PCE, 560 µg/L TCE, 1,800 µg/L cis-1,2-dichloroethene (cis-1,2-DCE), and 88 µg/L vinyl chloride (VC). These concentrations were substantially higher than concentrations measured in groundwater samples from site monitoring wells installed upgradient and downgradient of B817. Observation of the soil sample indicated a six-inch-thick, tight, silty clay layer in this interval. The soil and groundwater sample results and MIP data indicated an area of elevated contaminant concentrations immediately adjacent to the southwest corner of B817 near the unlined sump within the building.

The fact that the MIP response adjacent to the southwest corner of B817 did not show contamination from 0 to 15 feet bgs indicates that the contamination detected at 15 to 16 feet bgs did not originate at that location (i.e. from a surface or near-surface release) but was likely sourced further upgradient, perhaps beneath B817.

As part of this SI Report, the PDI groundwater data obtained from Geoprobe® grab sampling and sampling of monitoring wells were compiled to depict PCE and TCE concentrations in groundwater across the site prior to remedial actions. This provides a "baseline" condition to compare with current concentrations. **Figures 2-1** and **2-2** depict these historical PCE and TCE concentrations in groundwater, respectively.

2.2 SITE GEOLOGY/HYDROGEOLOGY

Site geology consists of an approximately 10- to 30-foot-thick fine sand and silty sand unit (termed the upper sand in this report) overlying glacial silt and clay with sand lenses (till) and weathered bedrock; the bedrock is encountered at approximately 20 to 25 feet bgs. Groundwater contamination has not been detected in the bedrock.

During the PDI (E&E, 2007) a tight, six-inch-thick, silty clay layer was observed at approximately 15 feet bgs, indicating the potential for more widespread clay lenses within the sandy layer. During this SI, an approximately 5-foot-thick layer of fine-grained, heterogeneous soil consisting of silt, clay, and sand was encountered at the base of the silty sand layer, and immediately overlying the shale bedrock. It was observed that the 6-inch silty clay layer noted

during the PDI marks the transition between the upper sand and the underlying more heterogeneous material.

Figure 2-3 provides a revised and updated version of the geological cross-section of the B817 site initially presented in the PDI report; updates include addition of monitoring and substrate injection wells installed along and near the cross-section line, revision of CVOC plume contours based on September 2013 monitoring well sampling results, and additional stratigraphic information obtained during the 2014 SI field sampling event.

The depth to groundwater across the site in September 2013 varied from approximately 2 feet bgs at well WSA-MW16 to 20 feet bgs at well WSA-MW21. Slug test results reported by E&E (2004) indicate that the hydraulic conductivity of the transmissive silty sand zone ranges from approximately 8 to 106 feet/day (ft/day) with a geometric mean of approximately 27 ft/day. The horizontal hydraulic gradient in the overburden groundwater was reported to be 0.04 foot/foot (ft/ft) in the Final Groundwater Treatability Pilot Study, based on data collected in May 2002 (E&E, 2004). This gradient is similar to that indicated by the potentiometric surface map for September 2012 presented in the Spring 2013 Annual Monitoring Report (FPM Group, Inc. [FPM], 2013) (0.045 ft/ft between wells B817MW-003 and WSA-MW21). Given an approximate hydraulic gradient of 0.04 ft/ft, a hydraulic conductivity range based on slug tests of 8 to 106 ft/day, and an assumed effective porosity for the sandy, transmissive zone of 0.25, the calculated range in groundwater seepage velocity is 1 to 17 ft/day. Site data and concentration analyses suggest that the velocity is closer to the low end of the range (1 foot/day) given that contaminant degradation is rate-limited and the CVOC plume has not reached the creek. This observation is consistent with groundwater seepage velocity estimates of 4.8 ft/day presented in the Treatability Pilot Test report (E&E, 2004) and 0.29 ft/day presented in the PDI report (E&E, 2007).

2.3 SELECTED REMEDY

The recommended remedy selected for the B817/WSA site as detailed in the Record of Decision (ROD, AFRPA [2009]) is enhanced bioremediation to remove CVOCs from site groundwater. Enhanced bioremediation increases the rate of biodegradation of the groundwater contaminants, in this case by injecting a vegetable oil emulsion into the saturated zone. The vegetable oil emulsion enhances the natural degradation of CVOCs, reducing their concentration.

The cleanup goals for the site are NYSDEC Class GA Groundwater Quality Standards for CVOCs. In addition to enhanced bioremediation, the remedy includes institutional controls in the form of deed restrictions for affected groundwater, and a contingency plan of an air sparge wall (or other agreed upon action) if the surface water samples from the culverted section of Six Mile Creek contain elevated concentrations of DCE or VC that could be attributed to the site. Remaining CVOCs not fully treated by the enhanced bioremediation remedy are expected to attenuate naturally, and monitored natural attenuation (MNA) is used to monitor these processes (AFRPA, 2009).

To implement the enhanced bioremediation remedy, two separate vegetable oil injections have been performed at the site using seven permanent injection wells. The initial injection occurred in July 2008 (see *Final Interim Remedial Action Report*, Ecology and Environment Engineering, P.C. [EEEPC], 2011). The second injection occurred in July 2010, as described in the *Spring 2010 Annual Report Performance Monitoring* (FPM, 2011, Appendix D). The

injection wells are screened between 9 and 20 feet bgs, spanning the interval of the elevated MIP reading obtained near the southwest corner of B817 at a depth of 15 to 16 feet bgs. Vegetable oil injection locations are shown in the Site Plan (**Figure 1-2**).

SECTION 3

SUPPLEMENTAL INVESTIGATION ACTIVITIES

3.1 INTRODUCTION

This section presents the SI methodology and scope of work for soil and groundwater activities at the B817/WSA site. A dynamic work plan was prepared that outlined the use of a direct-push probe to rapidly collect closely-spaced soil and groundwater samples at varying depths along multiple transects across the plume with detailed core logging. Samples were analyzed in a mobile, onsite laboratory to guide the sampling program according to pre-determined decision logic (Parsons, 2014). Field decisions were made using near-real time data combined with the decision logic outlined in the work plan, allowing sampling locations to be progressively optimized to effectively achieve the objectives to the extent feasible within the allotted 1-week time period.

3.2 BUILDING EVALUATION

A building evaluation was conducted on July 12, 2014, and included a smoke test of the 1.5-inch sump discharge line from the sump located adjacent to the approximate center of the south wall of B817. The sump line transitions to a 4-inch line further from the sump. Sewer testing smoke candles were lit and inserted into the pipe and a blower applied to the discharge pipe. Smoke candles were applied three times over a 1-hour period.

In addition, a ground penetrating radar (GPR) and utility/cable locator were used on July 17, 2014, to help identify underground utility corridors and other potential pathways. The utility location/GPR was conducted by New York Leak Detection, Incorporated (NYLD).

3.3 SOIL AND GROUNDWATER INVESTIGATION

Soil samples were collected August 11 through 15, 2014, using a discrete sampler mounted onto a Geoprobe® system. Geoprobe® borings were advanced within an approximate 200-foot by 125-foot investigation area along seven transects across the groundwater plume as shown in **Figure 3-1,** for a total of 43 borings. These transects are described below:

- Transect 0 is located west of B817 and is comprised of only one boring. This transect location was chosen because elevated CVOC concentrations were previously detected in groundwater approximately 10 feet west of the line of vegetable oil injection wells; the boring was advanced to better understand the upgradient extent of the detected CVOC concentrations
- Transect 1 is located between the building and injection wells. The transect includes 10 borings and extends from just east of the sump to approximately 100 feet west of the end of the line of vegetable oil injection wells. This transect location was chosen due to the elevated CVOC concentrations detected in this area during the PDI from 15 to 16 feet bgs (Section 2.1.3) and the proximity to the building and sump within the building.
- Transect 2 is located near monitoring well B817-MW-003, and includes eight borings. The rationale for this location was that there was a sharp spike in the MIP

response at location MIP-02 from 16 to 17 feet bgs, which may indicate the presence of a clay lens containing sorbed contaminants that acts as a secondary source of contamination. Also, the groundwater data indicate that PCE/TCE concentrations increase between wells B817-MW-02 and WSAMW-18, indicating the potential presence of secondary (sorbed) "source" mass somewhere in that portion of the site.

- Transect 2.5 is midway between Transects 2 and 3, and includes six borings. The rationale for this transect was the same as for Transect 2.
- Transect 3 is located at monitoring well WSA-MW18 and includes 7 borings; this transect is located in an area where the MIP investigation indicated more elevated levels of CVOCs.
- Transect 4 is located just north of Perimeter Road and includes six borings. The rationale for this transect was to obtain additional information further downgradient of well WSAMW-18.
- Transect 5 is located south of Perimeter Road and includes five borings. This transect was chosen for the same reason as Transect 4.

Up to three soil samples were collected from each boring along all seven transects, for a total of 106 primary soil samples. In addition, two pairs of matrix spike/matrix spike duplicate (MS/MSD) samples were collected. Continuous core was collected from the ground surface to bedrock. Samples for laboratory analysis were collected from 5 feet to 20 feet bgs.

Groundwater samples were collected using a Geoprobe® Screen Point 22 (SP22) sampler from August 13 through 15, 2014. The sampler was equipped with a 6-inch-long screen to allow profiling of a sub-foot interval. All borings were described in boring logs, provided in Appendix B of this SI report. The Standard Operating Procedure (SOP) for the SP22 sampler is provided in the Remedial Action Work Plan (RAWP) Addendum (Parsons, 2014). In addition, a water sample was also collected from Manhole 2. For sample collection, an empty sample bottle was submerged into the manhole and retrieved once filled. Soil and groundwater samples were analyzed on-site using MobiLab™, a field laboratory operated by Stone Environmental, Inc. (Stone). The soil samples were collected and preserved in 10 milliliters (mL) of methanol by Parsons personnel; water samples were collected in unpreserved 40-mL volatile organic analysis (VOA) vials. Samples were hand delivered to the onsite laboratory immediately after collection; therefore, receipt temperatures were not measured. Soil samples were stored in a freezer in the laboratory before and after analysis. Water samples were stored in the refrigerator (<6° Celsius) before and after analysis.

Samples were analyzed by USEPA SW846 Method 8260C (gas chromatography / mass spectrometry [GC/MS]) set in selective ion monitoring (SIM) mode for five target CVOCs in accordance with Stone's SOP SEI-10.15.11 (*The Determination of Volatile Organic Compounds By GC/MS (SW846 USEPA Method 8260C*); this SOP was provided in the RAWP Addendum (Parsons, 2014). Stone's GC/MS Method 8260C is provided under the National Environmental Laboratory Accreditation Program (NELAP) fields of testing, for which Stone holds NELAP accreditation for soil and water in the State of New York. The analytical results associated with the samples were generated under a quality system that adheres to requirements specified in the NELAP standards.

3.4 MONITORING WELL INSTALLATION

Following the Geoprobe® soil and groundwater investigation, a cluster of three monitoring wells was planned for installation upgradient of the injection points with the intent of monitoring three small, vertically discrete zones of groundwater. The purpose of this well cluster was to obtain additional contaminant source characterization information near the eastern end of the building. However, preliminary results of the investigation determined that no additional monitoring wells are necessary due to the low concentrations of VOCs between the building and the vegetable oil injection locations. Therefore, no additional monitoring wells were installed at the site. See Section 4 for details regarding investigation results. Additional monitoring well(s) may be installed at a later time, as appropriate.

SECTION 4

RESULTS OF SUPPLEMENTAL INVESTIGATION

4.1 INTRODUCTION

This section presents the results from the 2014 SI. A building evaluation was conducted in July 2014, and in August 2014, 43 borings were advanced and logged, and 106 soil samples and 22 groundwater samples were collected and analyzed on-site. Two sets of MS/MSD analyses were analyzed for the soil matrix (samples 4-6-19 and 2.5-4-18) and one set was analyzed for the water matrix (2.5-5 (10-13)). Complete analytical results are provided in **Appendix B**.

4.2 BUILDING EVALUATION

During the July 2014 smoke test, smoke was observed coming from three floor drains within the building (front overhead door and two former restrooms). It was expected that the smoke would be observed at the B816 lift station; however, this was not the case and there was no evidence that the sump drain connects to the lift station. Smoke was not observed coming from the ground or any other location outside B817. Therefore, the results of the smoke test were inconclusive.

NYLD performed a utility location/GPR at the site on July 17, 2014. Equipment used for the GPR included a 250 millihertz (mHz) and a 500 mHz Noggin radar systems, and a MetroTech Vivax vLocPro2 pipe and cable locator. Utilities were located from the front of Building 817 to the fence line across Perimeter Road; utility lines are shown in **Figure 1-2** of this SI report.

4.2 GEOPROBE INVESTIGATION

4.2.1 Revised Geology

Site geology was further characterized by more detailed logging of continuous soil cores; boring logs from the investigation are provided in **Appendix B** of this SI report. Geologic cross sections were constructed to depict subsurface conditions; cross-section lines are shown in **Figure 4-1**. **Figure 4-2** shows the geology along the approximate longitudinal axis of the CVOC plume. The geology along this cross-section line consists of an approximately 10- to 18-foot-thick, higher permeability, fine sand and silty sand unit (the upper sand) underlain by a 2- to 5-foot-thick glacial silt and clay mixture, which overlies a 1- to 4-foot-thick, lower sand/silt unit that rests on weathered shale. Additionally, a lower silty clay lense was present along Transect 5 (cross-section boring BH-5-3). The finer-grained, lower-permeability zones are more ubiquitous than previously thought.

4.2.2 Soil

A tabulated summary of laboratory results for soil are provided in **Table 4-1**. Generally speaking, soil CVOC concentrations were low upgradient and directly downgradient of the vegetable oil injection wells (e.g., Transects 0, 1 and 2) and increased further downgradient of the vegetable oil injection wells (e.g., Transects 2.5, 3, 4 and 5). The highest concentrations of PCE, DCE and VC were found at two borings along Transect 2.5, at depths of 15’ bgs and 18’ bgs; the highest concentration of TCE was found along Transect 5 at a depth of 14’ bgs. Higher

concentrations of PCE and TCE were also found in samples in boring 1-10 in Transect 1. Transect 1 is located just upgradient of the vegetable oil injection wells, which is generally within the treatment zone. However, boring 1-10 is approximately 100 feet northwest of the treatment zone extent, which is where the higher concentrations of CVOCs were found along this transect.

Figures 4-3, and **4-5** present PCE, TCE, and DCE concentration isopleths for soil, respectively. The highest PCE and TCE concentrations are outside of the enhanced anaerobic bioremediation (EAB) treatment zone, with relatively elevated concentrations northwest and downgradient of the treatment zone (downgradient concentrations beginning at Transect 3 for PCE and Transect 2.5 for TCE). The highest concentration of DCE was detected at the center of Transect 2, which is coincident with the downgradient side of the EAB treatment area.

Figure 4-6 presents soil concentration pie charts depicting the molar ratios of CVOCs at each boring location. Note that the pies are equally sized and not sized relative to the total concentration at each boring. The figure shows that concentrations are mostly dominated by TCE with some borings having variable proportions of PCE. DCE concentrations were only detected along transects 1, 2 and 2.5, within and immediately downgradient of the EAB treatment zone. The only locations that were completely non-detect for CVOCs are located within the treatment area. Due to the general absence of VC in the soil, this parameter was excluded from the pie charts.

Figure 4-7A presents a graph showing total CVOC soil concentrations versus elevation for all samples, with a typical MIP log from within the plume (2006 PDI). The graph shows that the higher CVOC concentrations are located in the interval occupied by the finer-grained units underlying the primary transmissive (upper sand) zone. This observation is consistent with the PDI MIP results, which also indicate that the upper sand generally has relatively low CVOC concentrations, while the underlying finer-grained, less transmissive materials contain a majority of the CVOC mass. **Figure 4-7B** demonstrates that the maximum concentration was detected in the glacial fine grained material. The average CVOC concentrations in the glacial fine-grained material, lower sand, and weathered shale are similar. The upper sand has lower CVOC concentrations than the underlying units, indicating that most of the CVOC mass is below the upper sand, which is also the more significant flow zone. These plots support the hypothesis that back-diffusion of PCE and TCE into the transmissive zone (upper sand) is contributing to plume persistence, which is characteristic of a late stage plume.

Figure 4-8 presents the centerline cross section A-A' with soil concentrations. A discrete CVOC source within the soil was not identified. Contamination was found throughout the SI investigation area, but was more concentrated in the fine-grained, lower permeability unit below the upper sand. **Figure 4-9** presents cross section B-B' along Transect 2.5. **Figure 4-10** presents cross section C-C' along Transect 1, immediately upgradient of the vegetable oil injection wells.

4.2.3 Groundwater

A tabulated summary of laboratory results for groundwater is provided in **Table 4-2**. **Figure 4-11** provides a chart comparing the SI groundwater results along Transect 1 with the baseline (2006) concentrations. This figure indicates that CVOC concentrations have decreased within the bioremediation treatment zone since 2006, because all treatment area CVOC concentrations are considerably less than the baseline (2006) concentrations. The highest total CVOC

concentrations detected in 2014 occurred at BH-1-10, which is sidegradient to the treatment zone. Levels of cis-DCE, a daughter product of PCE and TCE, were elevated during the baseline sampling event. However, concentrations of CVOCs within the EAB treatment zone have decreased at a faster rate than downgradient of the treatment zone, indicating the EAB injections operated as intended. In particular the, concentrations of PCE and TCE are depleted in the biowall area, and concentration at MW-02 show a decrease in TCE from 25 µg/L to ND and an increase in DCE from < 1 to 80 µg/L.

As shown in **Table 4-2**, CVOCs were detected in 20 primary groundwater samples (not including the MS/MSD set). Of these 20 samples, nine had total CVOC concentrations between 10 and 50 µg/L at depths ranging from 5 to 19 feet bgs. An additional five samples had total CVOC concentrations exceeding 50 µg/L at depths ranging from 10 to 18 feet bgs. The highest concentration of PCE (35.6 µg/L) was detected along downgradient Transect 2.5 (10-13 feet bgs), and the highest concentration of TCE (147 µg/L) occurred at boring 1-10 (10-13 feet bgs), sidegradient and northwest of the vegetable oil injection points (**Figures 4-12** and **4-13**). The highest concentration of cis-1,2-DCE was detected at boring 1-2, near the former sump location, at a depth of 16.5-18 feet bgs. The sample collected from the manhole, MH-2, resulted in PCE and TCE detections, but neither above the site cleanup goal of 5 µg/L.

Comparison of **Figures 4-12** and **4-13** which show PCE and TCE concentrations in groundwater during the 2014 SI, with **Figures 2-1** and **2-2** which show PCE and TCE concentrations during the 2006 PDI, indicates similar plume footprints but overall lower concentrations between B817 and Perimeter Road in 2014. **Figure 4-14** provides TCE groundwater concentrations along plume center line cross-section A-D (see **Figure 4-1** for cross-section location). TCE concentrations within the EAB treatment zone are significantly reduced compared to concentrations detected farther downgradient (southwest) of the treatment zone. **Figure 4-15** shows total volatile organic compounds (VOCs) in groundwater along Transect 1. Similar to **Figure 4-14**, this cross-section also shows the relatively low magnitude of CVOC concentrations in the treatment area, with concentrations increasing to the west.

SECTION 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

A building evaluation was conducted on July 12, 2014, and included a smoke test of the 1.5-inch sump discharge line from the sump located in the center south portion of B817. No evidence was observed that indicated the sump drain goes to the lift station. Smoke was not observed coming from the ground or any other location outside B817. Results of the smoke test were inconclusive in that the subsurface route of the sump drain was not determined. A utility location/GPR was conducted on July 17, 2014 from the building to the fence on the other side of Perimeter Road; the utility locations are provided in **Figure 1-2**.

The enhanced anaerobic biodegradation injections were successful where applied, but the effects are localized. Soil CVOC concentrations within the EAB treatment zone have decreased relative to pre-treatment levels. The highest CVOC concentrations in soil occur downgradient of the treatment zone, as well as in an outlying area northwest of the EAB treatment area. CVOC concentrations (and mass) in soil are considerably higher in the finer-grained layers below the more permeable upper sand. Furthermore, these thinner, fine-grained layers exert significant control over contaminant fate and transport. This control is due to back diffusion of CVOCs from the fine grained sediments that sustain the downgradient portion of the plume despite the treatment of the upgradient source area near B817. The importance of these fine grained units was not previously recognized during installation and sampling of conventional monitoring wells and soil borings. Site data support this revised conceptual site model (CSM), with concentration profiles indicating that PCE/TCE mass is sorbed in fine-grained (silt/clay) material underlying the more transmissive upper sand, indicating that back-diffusion of PCE and TCE into the transmissive zone is contributing to plume persistence. This occurrence is a primary cause of long clean-up times at chlorinated solvent sites and is indicative of a late stage plume (Sale, *et al*., 2013).

PCE groundwater concentrations in the 2014 SI evaluation area are highest along the centerline of the plume from Transect 2.5 to Transect 4. The detected concentrations in Geoprobe® grab samples collected in this portion of the SI evaluation area exceed 20 ug/L, with a maximum concentration of 35.6 µg/L. TCE concentrations detected in this same downgradient area during the 2014 SI have a similar magnitude; the highest TCE concentration (147 µg/L) was detected northwest of the EAB treatment area at the western end of Transect 1. This maximum TCE detection is not consistent with the previous CSM and suggests an additional source of TCE west of B817. DCE detections occurred primarily in Transect 1 and are the result of reductive dechlorination of PCE and TCE in the EAB treatment area. Comparison of 2014 SI and 2006 PDI data indicates that, although the plume has persisted, CVOC concentrations in groundwater have generally decreased since 2006.

5.2 RECOMMENDATIONS

The *Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3)* (USEPA, 1996) provides the following definition of OPS:

> The phrase "operating properly and successfully" involves two separate concepts. A remedial action is operating "properly" if it is operating as designed. That same system is operating "successfully" if its operation will achieve the cleanup levels or performance goals delineated in the decision document. Additionally, in order to be successful, that remedy must be protective of human health and the environment. For instance, a pump and treat system may be operating properly according to its design for pumping and extracting groundwater, but not operating successfully because one or more contaminant levels has not been reduced in the aquifer. The success of a particular remedial action will be evaluated based on whether it successfully addresses the particular contaminant(s) it was designed to remediate. Where more than one remedial action is required for a parcel, all such actions must operate properly and successfully, and USEPA must evaluate the suite of actions comprehensively prior to transfer to determine that all remedial actions have been taken. Thus, USEPA interprets the term "operating properly and successfully" to mean that the remedial action is functioning in such a manner that it is expected to adequately protect human health and the environment when completed.

Results from the investigation indicate that CVOC concentrations directly surrounding the vegetable oil injection well array are low, indicating the remedy (EAB) is operating properly, and is protective of human health and the environment. Although data indicate that back-diffusion of PCE and TCE into the transmissive zone is contributing to downgradient plume persistence, the enhanced natural attenuation remedy stipulated in the ROD is operating properly and successfully because it has clearly increased bioremediation rates. Continued use of MNA with institutional controls is a reasonable plan that is protective of receptors and will eventually achieve cleanup goals. Therefore, preparation and submission of an OPS report to USEPA is recommended.

It is also recommended that the CSM be updated with the additional site data obtained during the 2014 SI. The additional site data include higher CVOC concentrations sidegradient (northwest) of the treatment area, as well as a greater degree of geologic heterogeneity including lower permeability units ubiquitous throughout the site (at least between B817 and Perimeter Road). The updated CSM will be used to determine the value of additional active remediation.

Finally, an additional investigation is recommended to further delineate the northwest portion of the contaminated area. The additional investigation is expected to include further direct push sampling of soil and groundwater and installation of at least one additional monitoring well.

SECTION 6

REFERENCES

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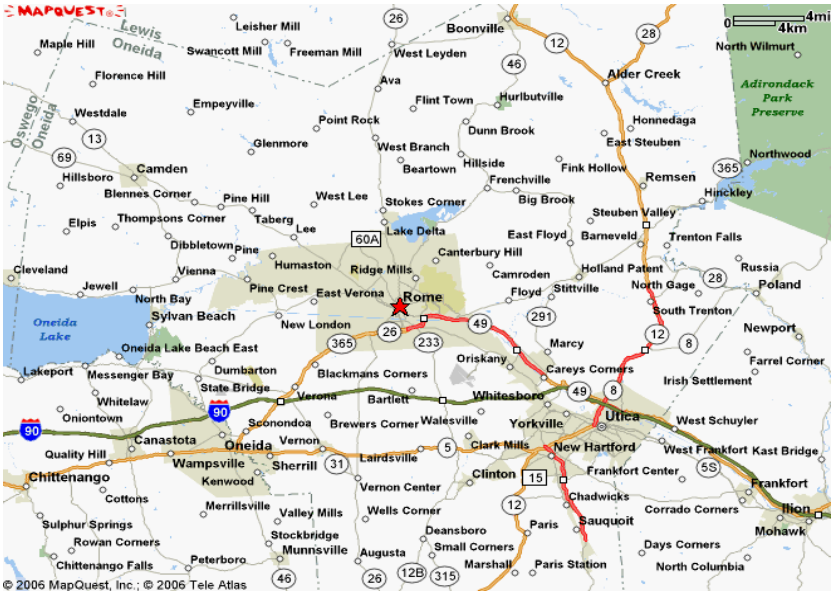
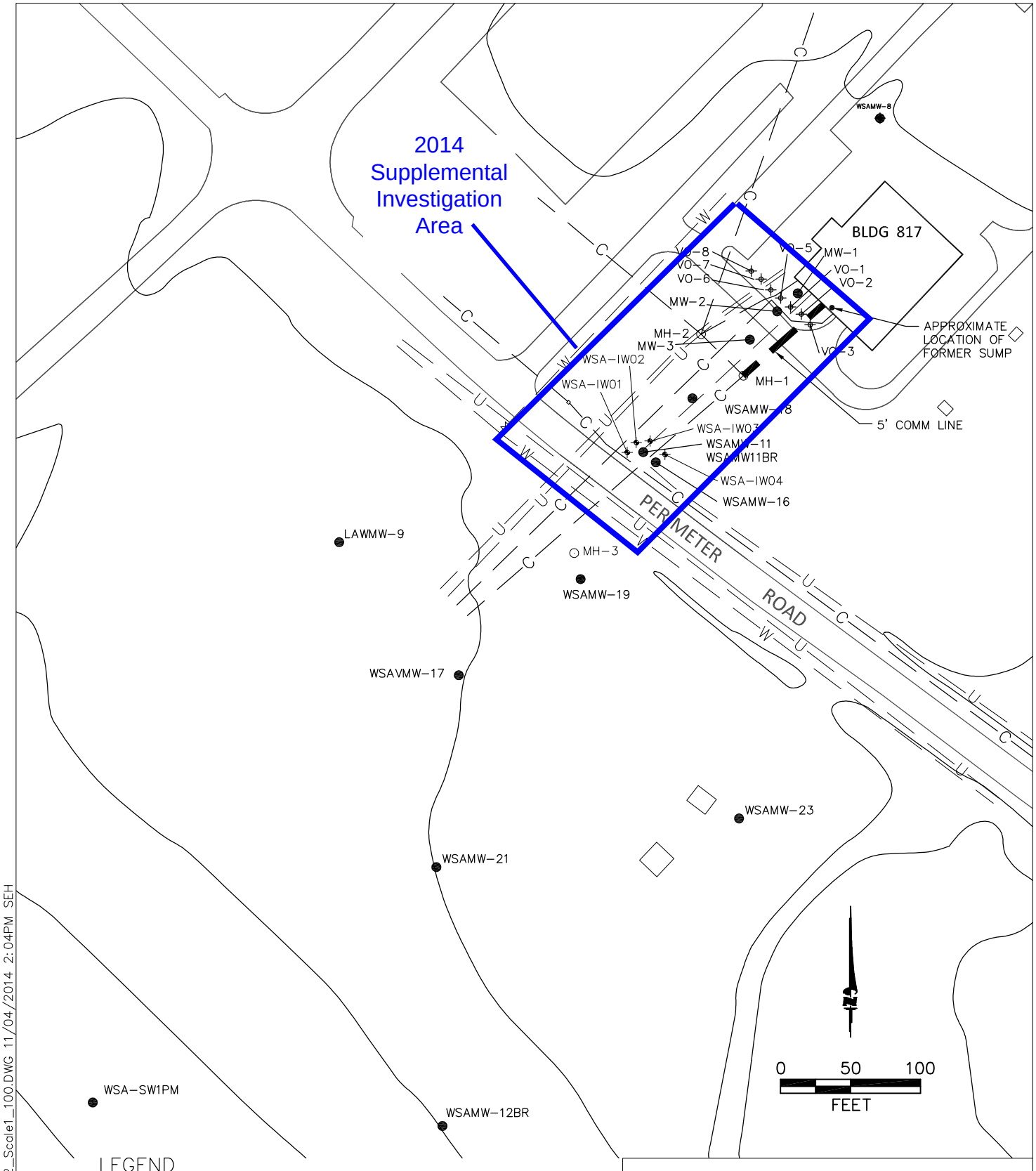
FIGURES

FIGURE 1-1
LOCATION OF ROME, NEW YORK



LOCATION OF THE FORMER GRIFFISS AIR FORCE BASE (NOW THE GRIFFISS BUSINESS AND TECHNOLOGY PARK)

Maps Copied From www.mapquest.com



LEGEND

VO-8	VEGETABLE OIL INJECTION WELL
—W—	WATER LINE
—C—	COMMUNICATIONS
—U—	UNKNOWN UTILITIES
WSA-IW01	INJECTION WELL
WSAMW-18	MONITORING WELL
MH-1	MANHOLE

FIGURE 1-2

SITE PLAN

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PARSONS

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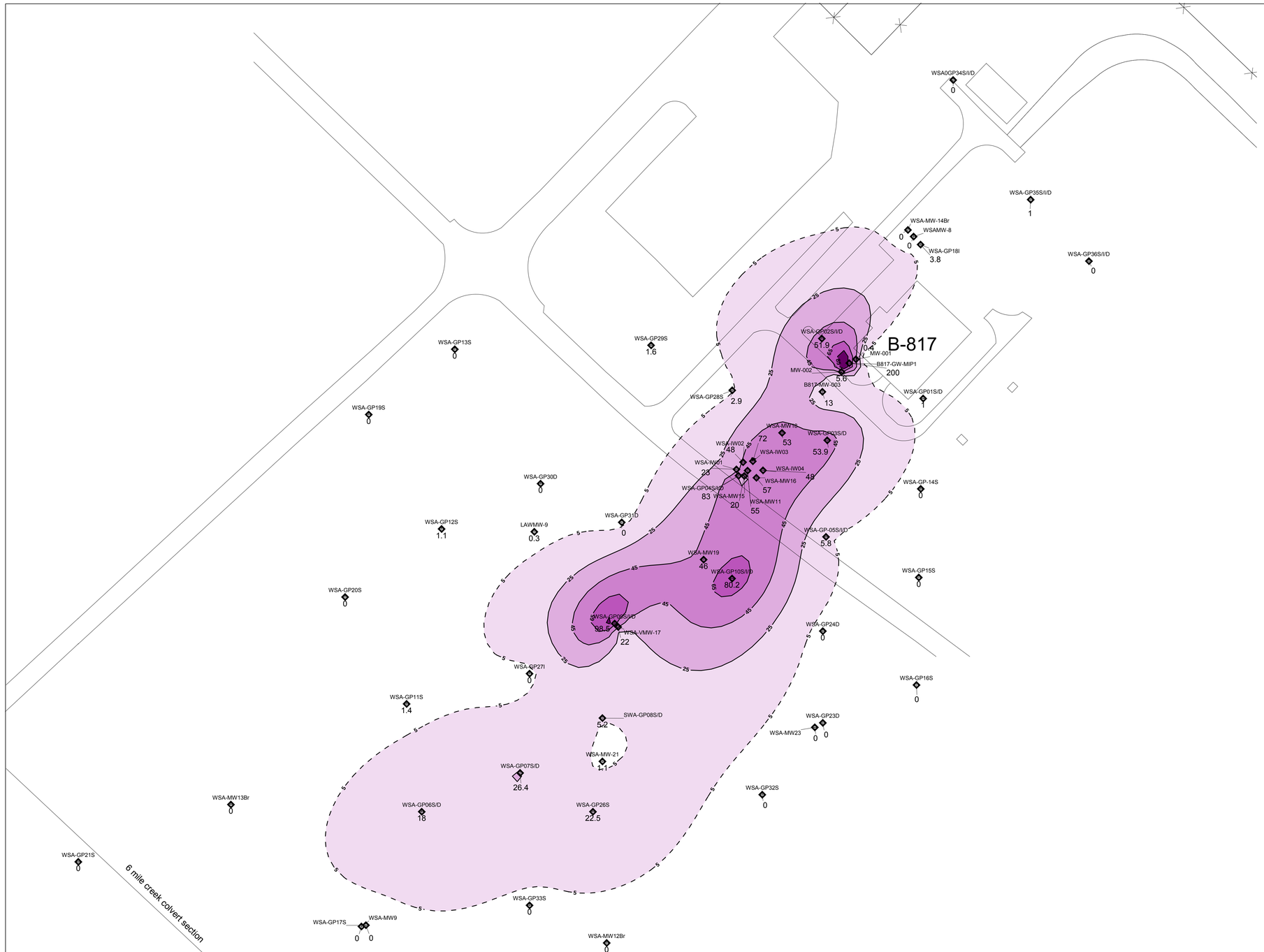


Color Scale (µg/L)

105
85
65
45
25
5

Scale Bar

0 50 100 150 200
Feet

Title:

FIGURE 2-1
PCE CONCENTRATIONS
IN GROUNDWATER DURING 2006 PDI

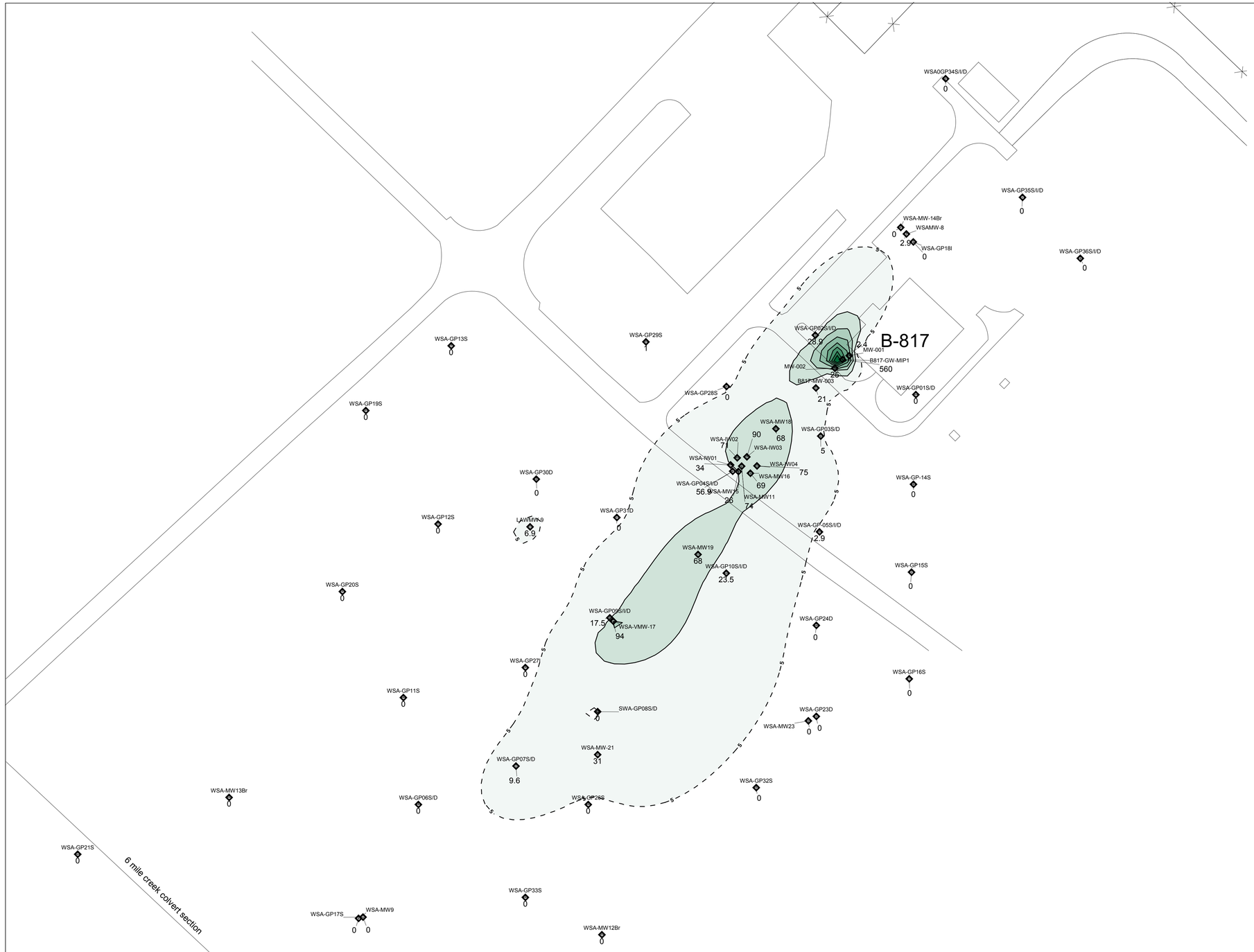
BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PREPARED BY:

PARSONS

Drawn by: JWS	Date: 1/10/15
Project Manager: JHL	Date:

File name: PDI PCE nobh1-10.srf



Color Scale (µg/L)

285
245
205
165
125
85
45
5

Scale Bar

0 50 100 150 200

Feet

Title:

FIGURE 2-2
TCE CONCENTRATIONS
IN GROUNDWATER DURING 2006 PDI

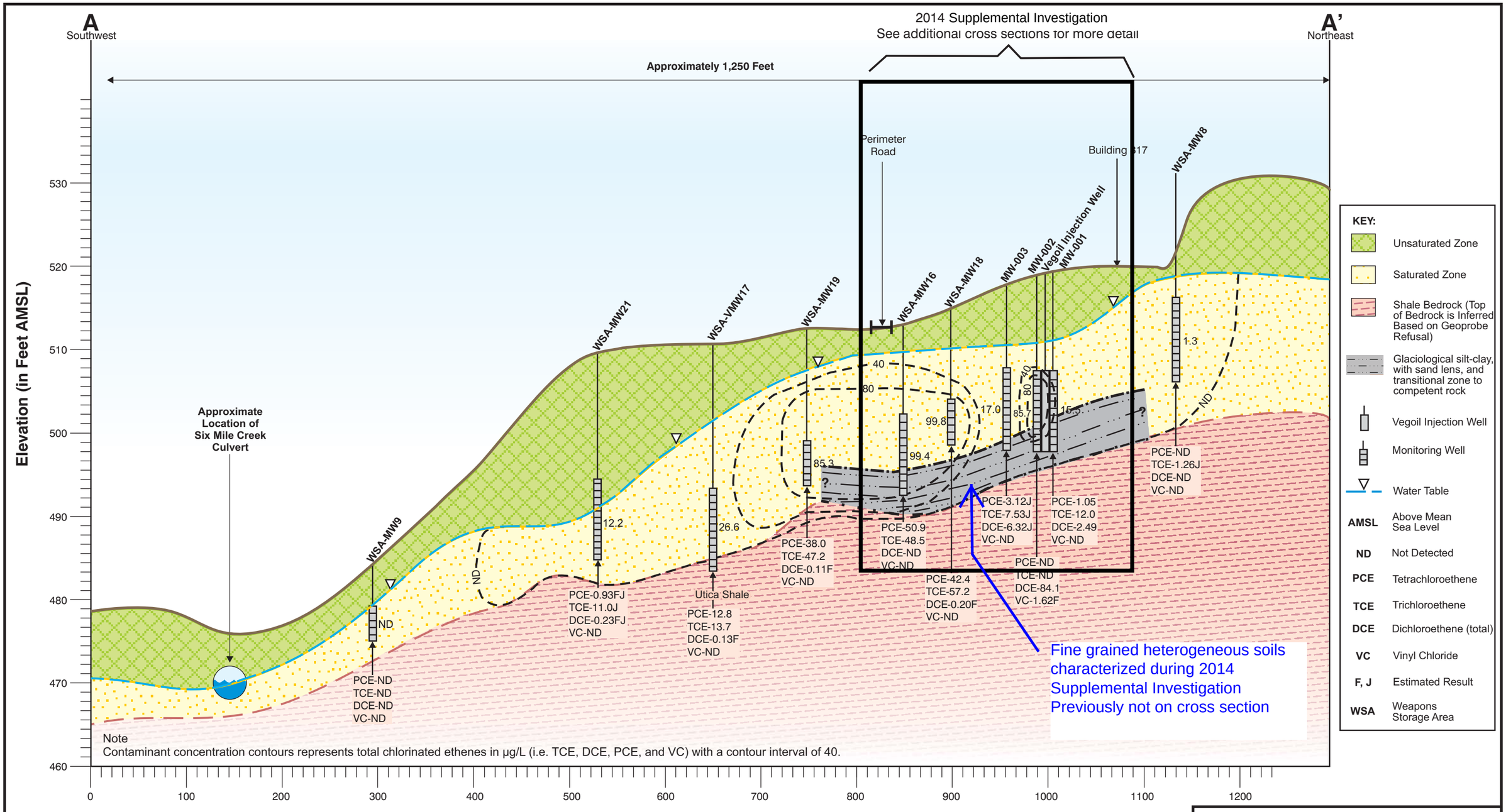
BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PREPARED BY:

PARSONS

Drawn by: JWS	Date: 1/10/15
Project Manager:	Date:

File name: PDI TCE nobh1-10.srf



Note
Contaminant concentration contours represents total chlorinated ethenes in µg/L (i.e. TCE, DCE, PCE, and VC) with a contour interval of 40.

SOURCE: Ecology and Environment, Inc. 2001

draw\746809 Cross Section.cdr ma 10/22/2014

FIGURE 2-3

SITEWIDE CROSS SECTION WITH 2013 GROUNDWATER CONCENTRATIONS

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
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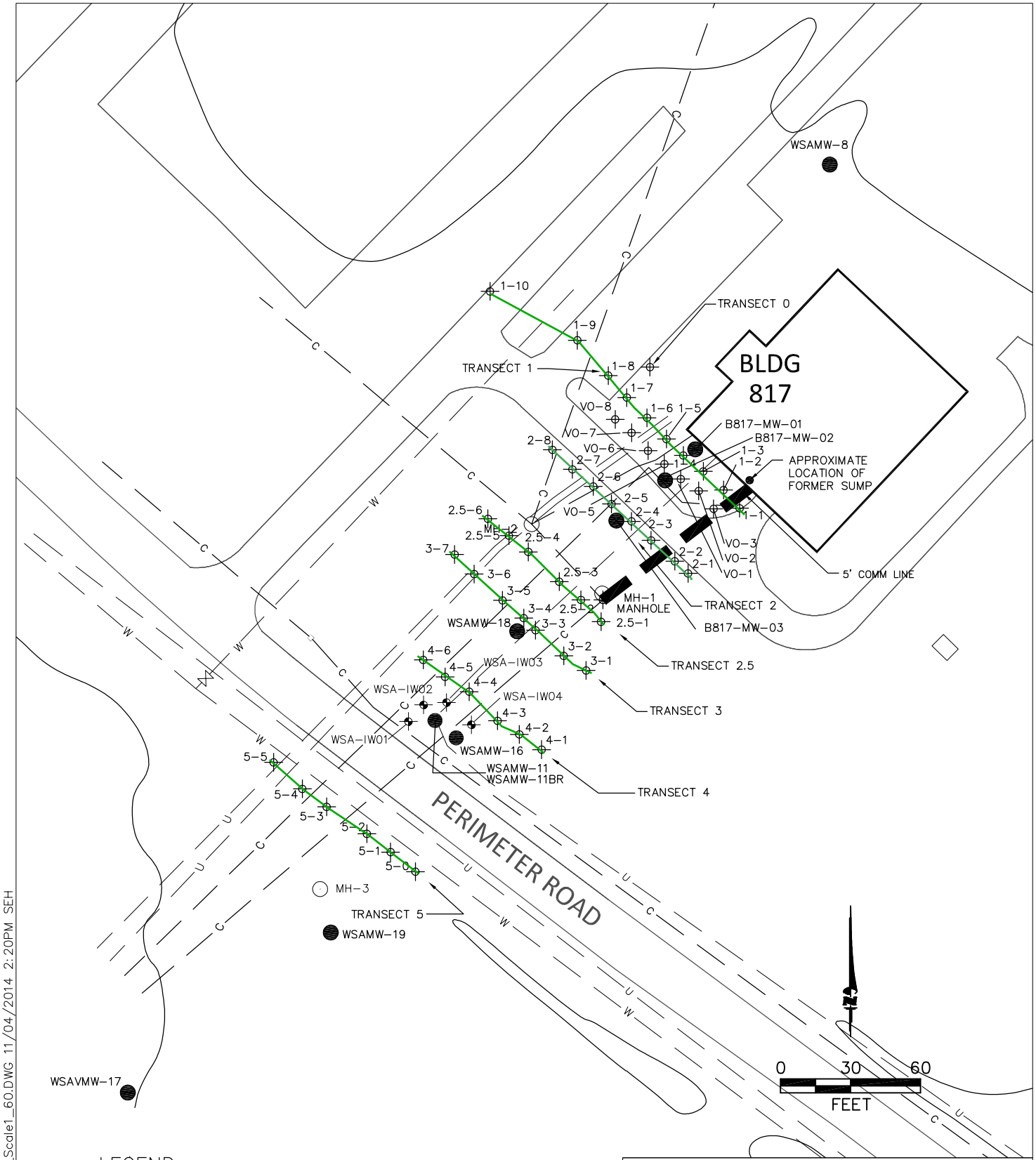

LEGEND

- VO-8 — VEGETABLE OIL INJECTION WELL
- 1-9 — GEOPROBE BORING
- W — WATER LINE
- C — COMMUNICATIONS
- U — UNKNOWN UTILITIES
- WSA-IW01 — ISCO INJECTION WELL
- WSAMW-18 — MONITORING WELL
- MH-1 — MANHOLE

FIGURE 3-1

2014 SI SAMPLE LOCATIONS

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PARSONS

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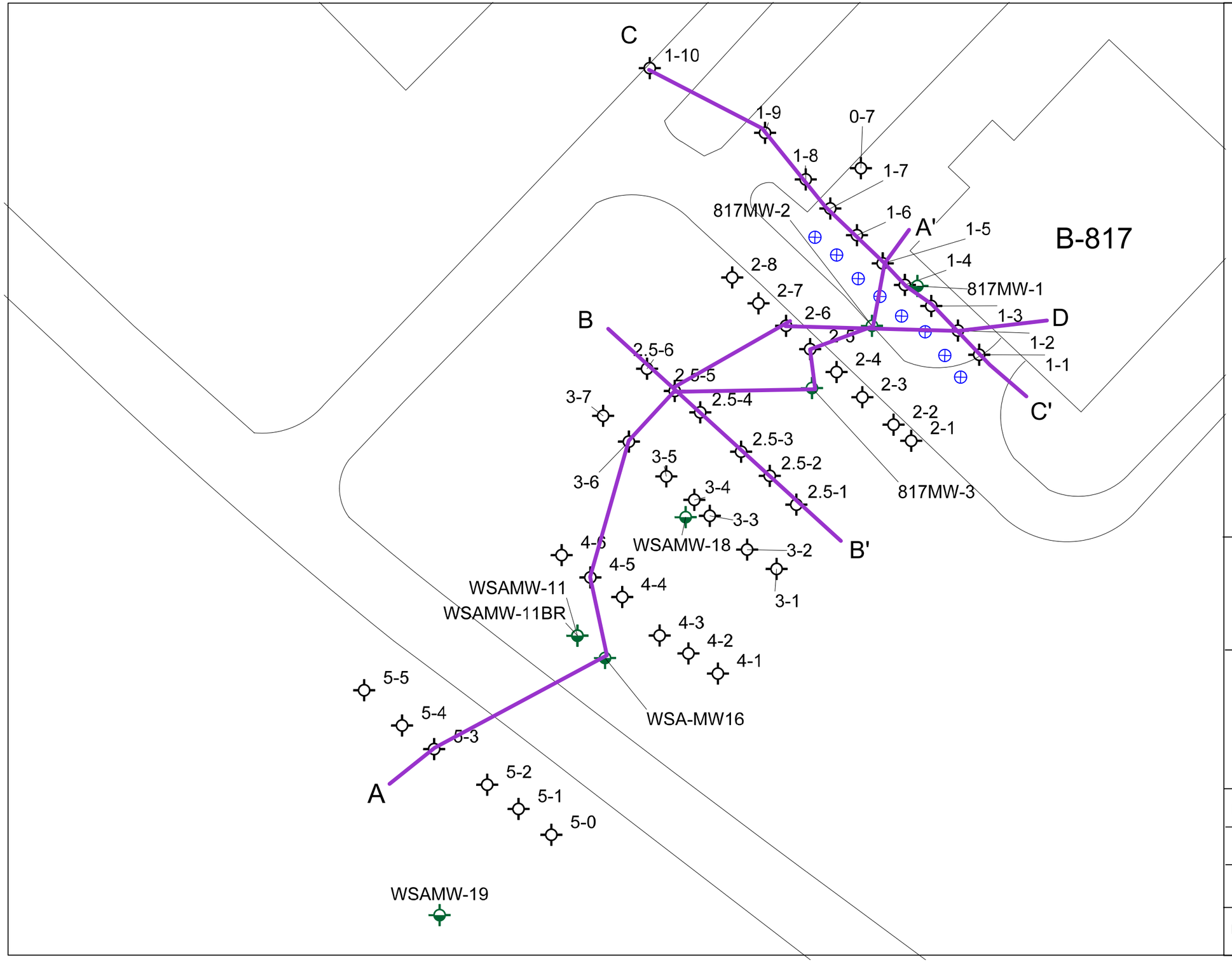


Notes:

A-A' trends through borings having maximium soil concentrations.

A-D' trends through groundwater grab sample locations.

LEGEND

Soil Boring

Treatment Injection Point

SCALE

0 25 50 75 100
FEET

Title:

FIGURE 4-1
CROSS SECTION LOCATION MAP

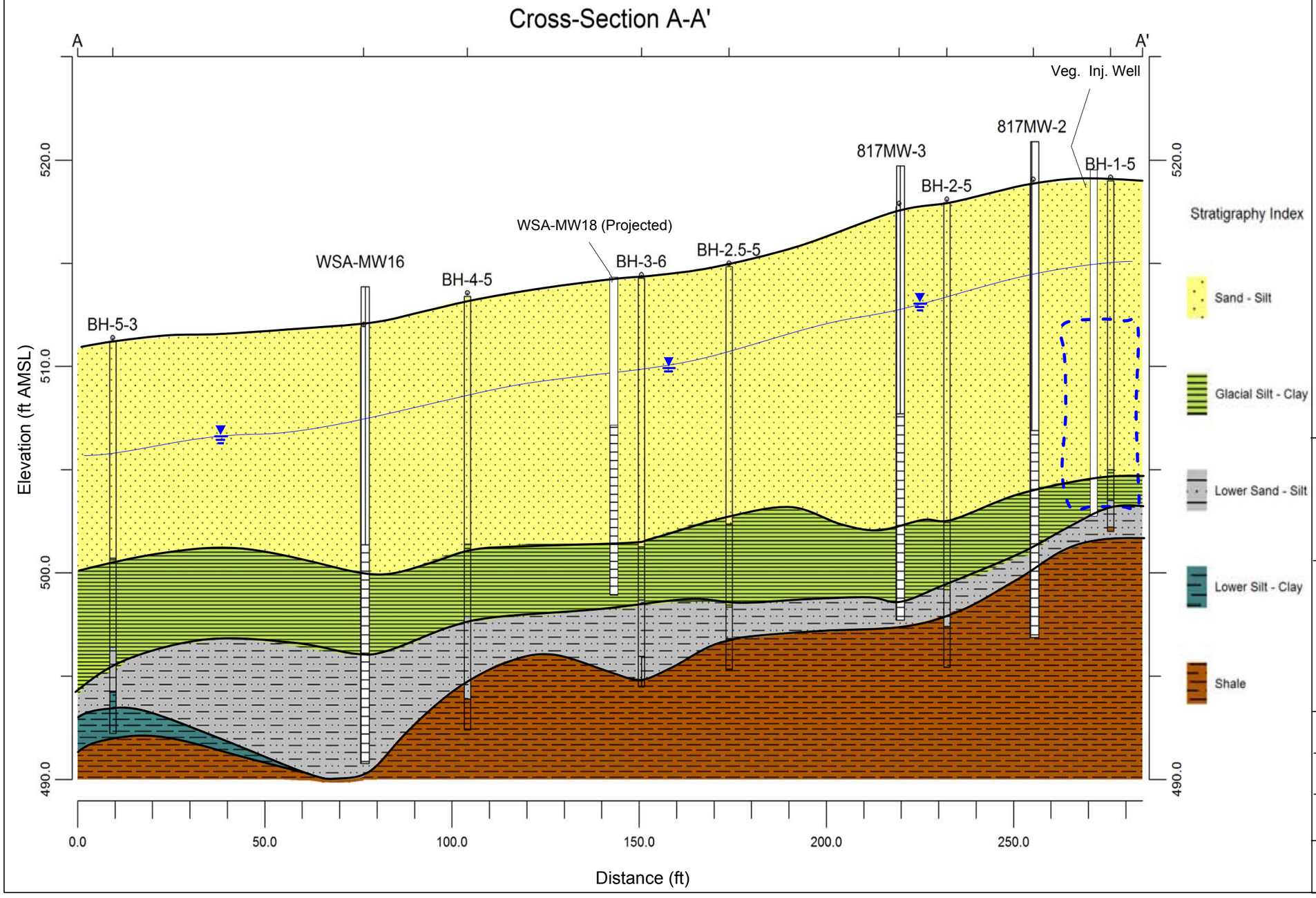
Building 817/WSA 2014 SI Report
Former Griffiss Air Force Base
Rome, New York

PREPARED BY:

PARSONS

Drawn by: JWS	Date: 11/5/14
Project Manager: JHL	Date: 11/5/14

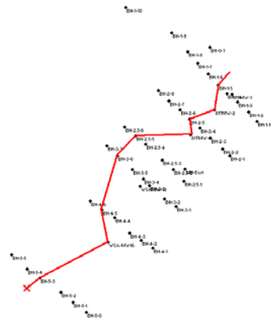
File name: cross section location map.srf



Notes:

Vertical exaggeration = x 5.5

Reference Map



Title:

FIGURE 4-2
CROSS SECTION A-A' ALONG
APPROXIMATE PLUME CENTERLINE

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

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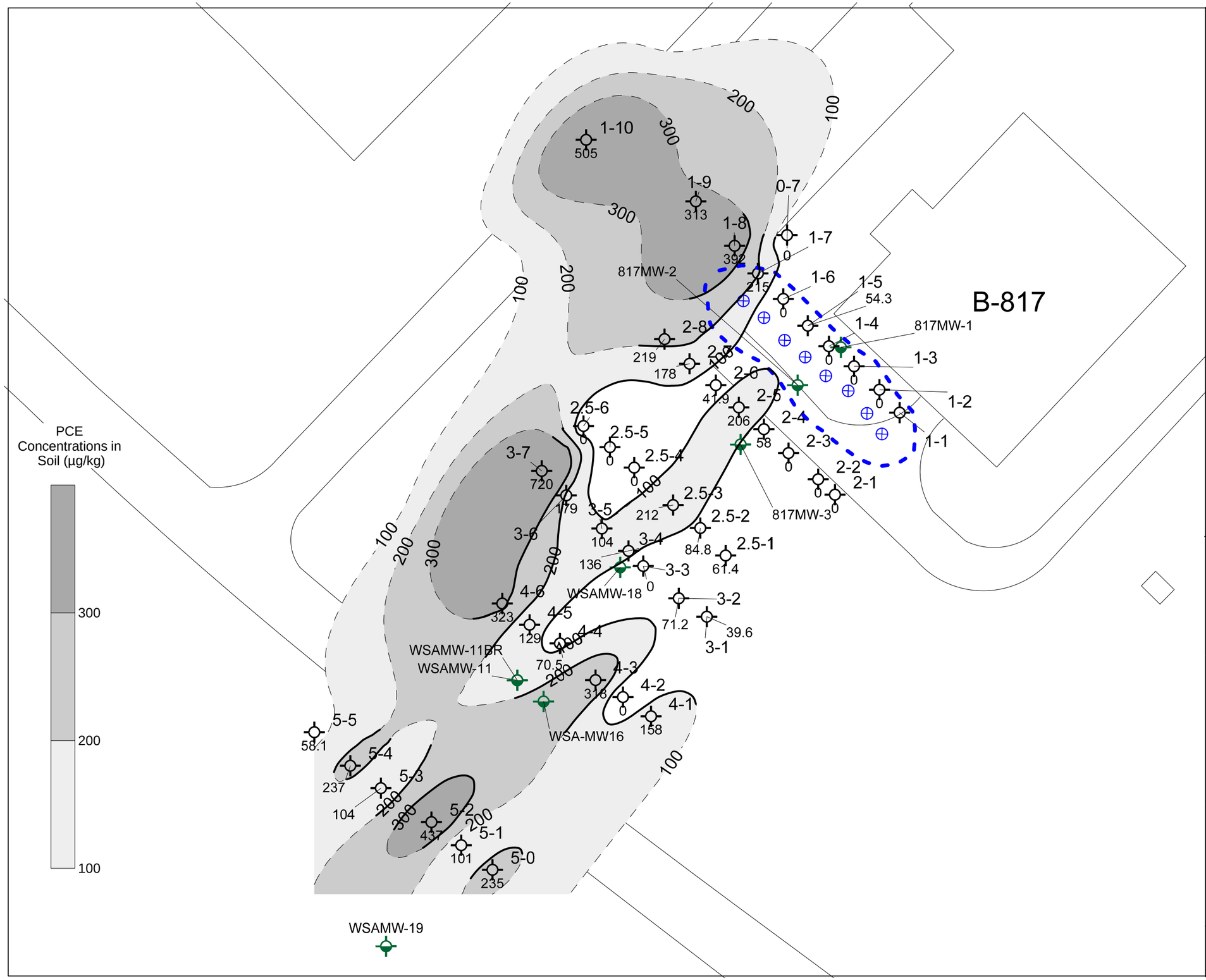
Drawn by:	JWS	Date:	11/5/14
Project Manager:	JHL	Date:	11/5/14

File name: Section A-A.srf



Notes:

LEGEND

- Soil Boring
- Treatment Injection Point
- Monitoring Well (for spatial reference only)
- Approximate Treatment Area

SCALE

0 25 50 75 100
FEET

Title:

FIGURE 4-3
PCE SOIL CONCENTRATION ISOPLETHS
HIGHEST SOIL CONCENTRATION AT
EACH LOCATION

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Former Griffiss Air Force Base
Rome, New York

PREPARED BY:

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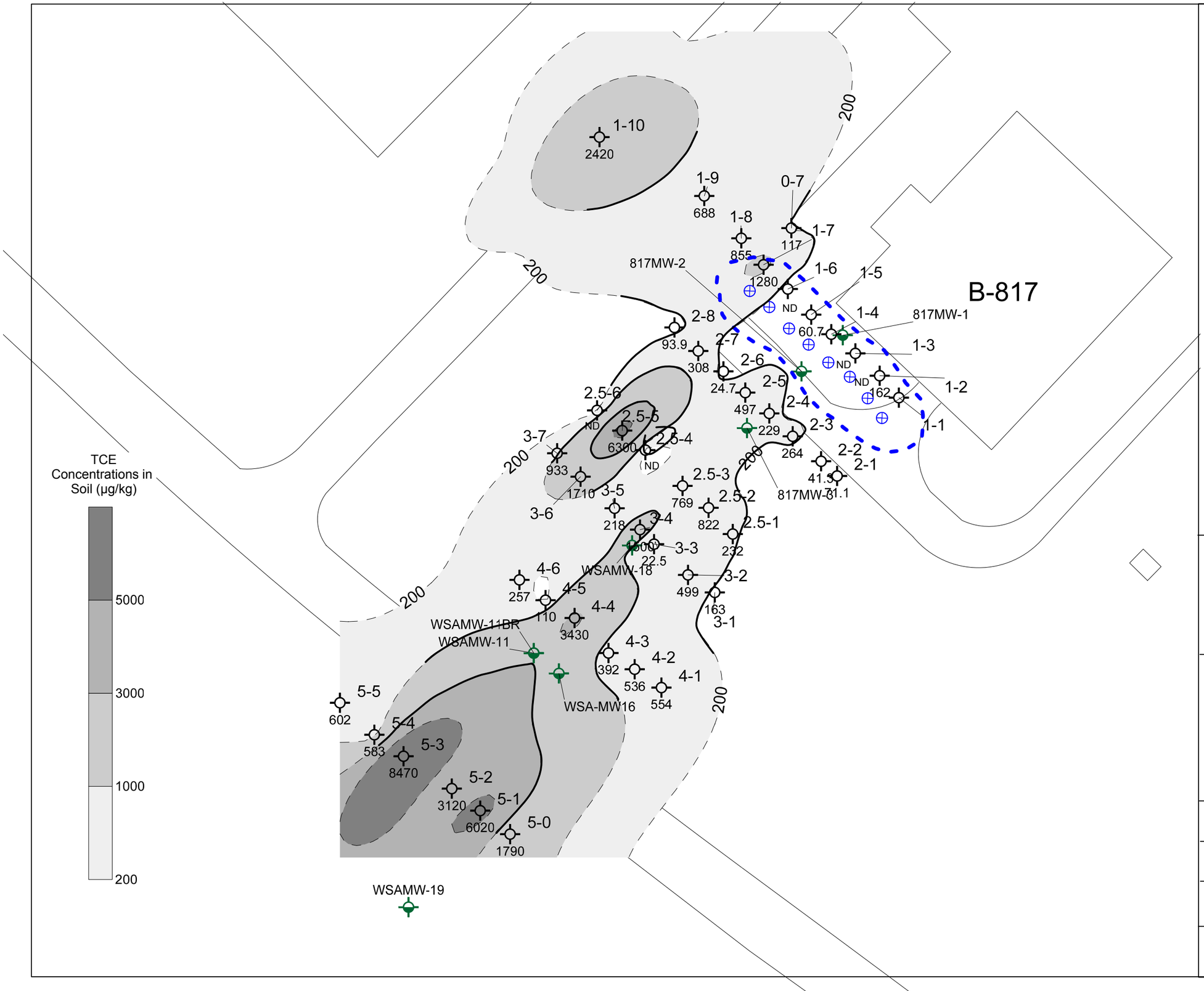
Drawn by:	JWS	Date:	11/5/14
Project Manager:	JHL	Date:	11/5/14
File name:	PCE-soil.srf		



Notes:

LEGEND

- Soil Boring
- Treatment Injection Point
- Monitoring Well (for spatial reference only)
- Approximate Treatment Area (dashed when inferred)

SCALE

0 25 50 75 100

FEET

Title:

FIGURE 4-4
TCE SOIL CONCENTRATION ISOPLETHS
HIGHEST SOIL CONCENTRATION AT
EACH LOCATION

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
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PREPARED BY:

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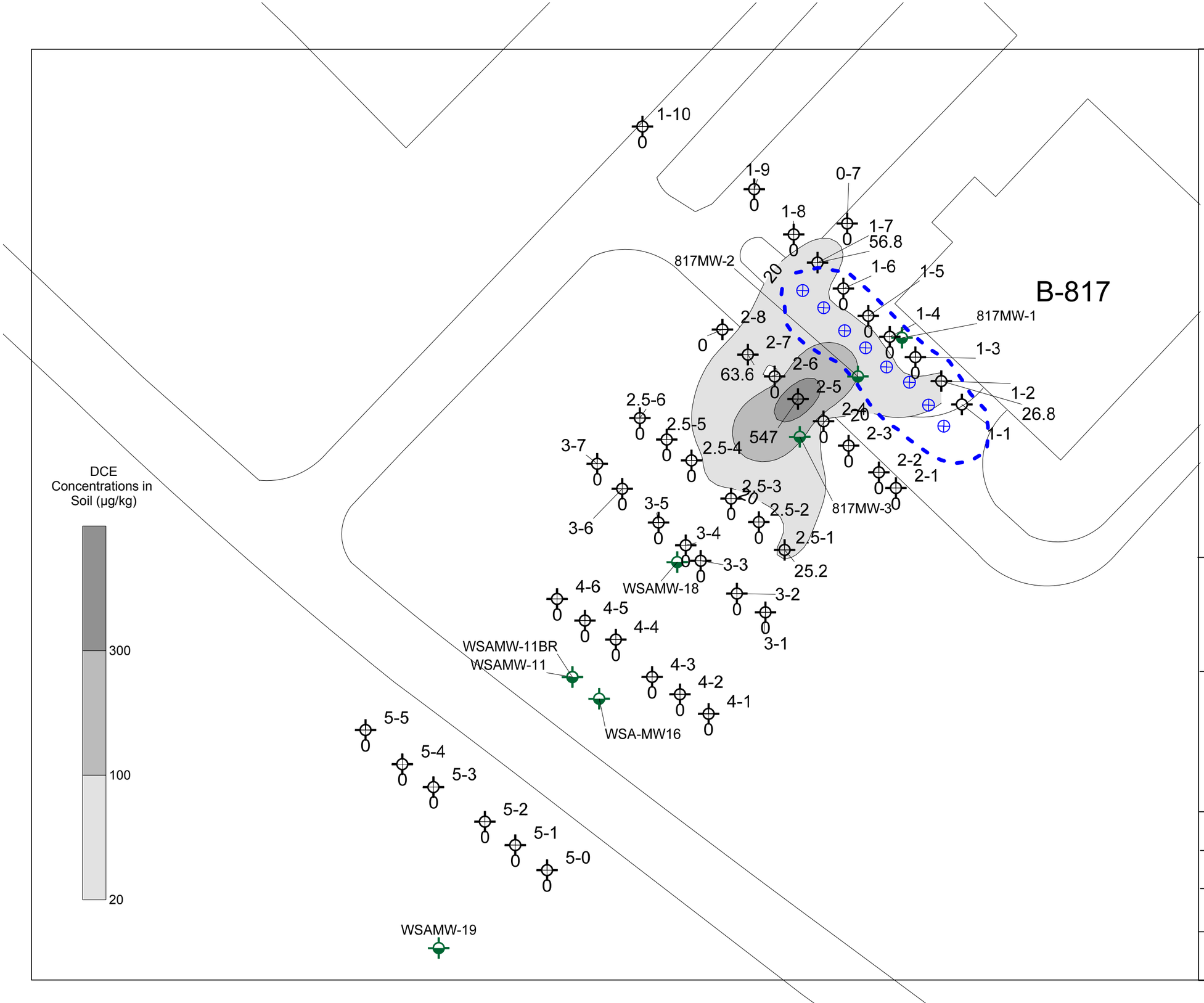
Drawn by:	JWS	Date:	11/5/14
Project Manager:	JHL	Date:	11/5/14
File name:	TCE-soil.srf		



Notes:

LEGEND

- Soil Boring
- Treatment Injection Point
- Monitoring Well (for spatial reference only)
- Approximate Treatment Area (dashed when inferred)

SCALE

0 25 50 75 100

FEET

Title:

FIGURE 4-5
DCE SOIL CONCENTRATION ISOPLETHS
HIGHEST SOIL CONCENTRATION AT
EACH LOCATION

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

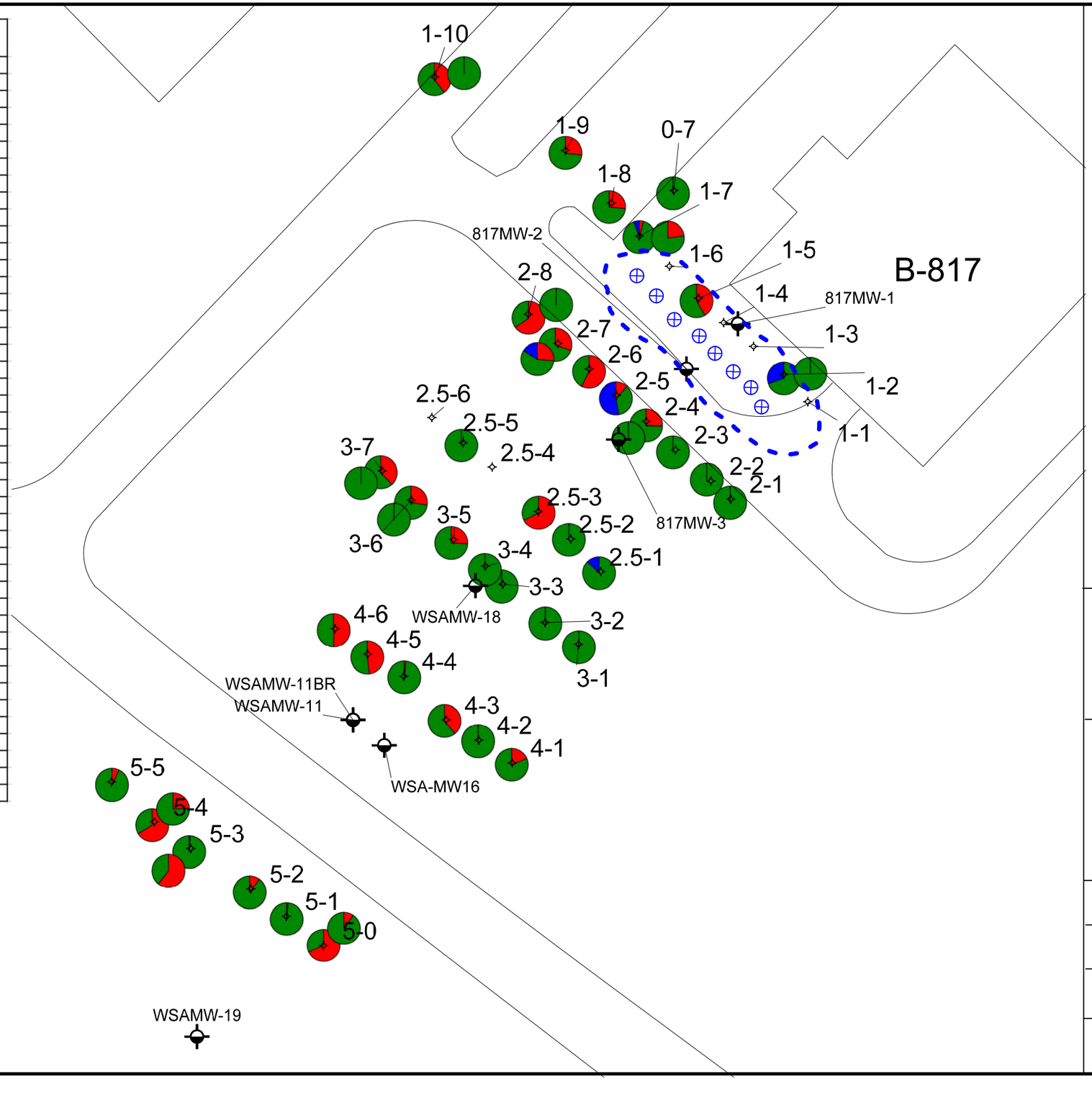
PREPARED BY:

PARSONS

Drawn by:	JWS	Date:	11/5/14
Project Manager:	JHL	Date:	11/5/14

File name: DCE-soil.srf

Sample ID	Total CVOC Micromoles
0-7-15	0.9
1-10-15	18.4
1-1-17	0.0
1-2-17	1.2
1-3-16	0.0
1-4-15	0.0
1-5-16	0.8
1-6-10	0.0
1-7-15	10.7
1-8-14	8.9
1-9-12	7.1
2.5-1-15	2.0
2.5-2-20	6.3
2.5-3-19	5.9
2.5-4-14	0.0
2.5-5-15	47.9
2.5-6-14	0.0
2-1-14	0.5
2-2-14	0.3
2-3-18	2.0
2-4-17	1.4
2-5-20	10.7
2-6-17	0.4
2-7-19	4.1
2-8-20	9.0
3-1-18	1.2
3-2-19	3.8
3-3-16	0.2
3-4-19	11.4
3-5-16	2.2
3-6-18	13.0
3-7-14	11.4
4-1-18	5.2
4-2-18	4.1
4-3-18	4.9
4-4-18	26.5
4-5-16	1.6
4-6-14	3.9
5-0-20	15.0
5-1-14	46.4
5-2-14	26.4
5-3-14	65.1
5-4-20	5.9
5-5-18	4.9



Notes: Samples containing low or non-detect concentrations or concentrations that are similar to another sample in the same boring that is depicted are omitted.

Where there are two overlapping pie symbols there were two samples with significant differences in PCE-TCE-DCE ratios, and therefore both are shown.

LEGEND

PCE, DCE, TCE — Molar ratio of detected chlorinated VOCs

Monitoring well (for spatial reference)

Treatment Injection Point

Approximate Treatment Area

SCALE

0 25 50 75 100

FEET

Title:

FIGURE 4-6
SOIL CONCENTRATION PIE CHART
PCE-TCE-DCE RATIOS

Building 817/WSA 2014 SI Report
Former Griffiss Air Force Base
Rome, New York

PREPARED BY:

PARSONS

Drawn by:	JWS	Date:	11/5/14
Project Manager:	JHL	Date:	11/5/14

File name: soil-pies-V2.srf

Figure 4-7A - Soil Concentration Versus Elevation - All Samples Compared with Typical Plume MIP Log (2006 PDI)

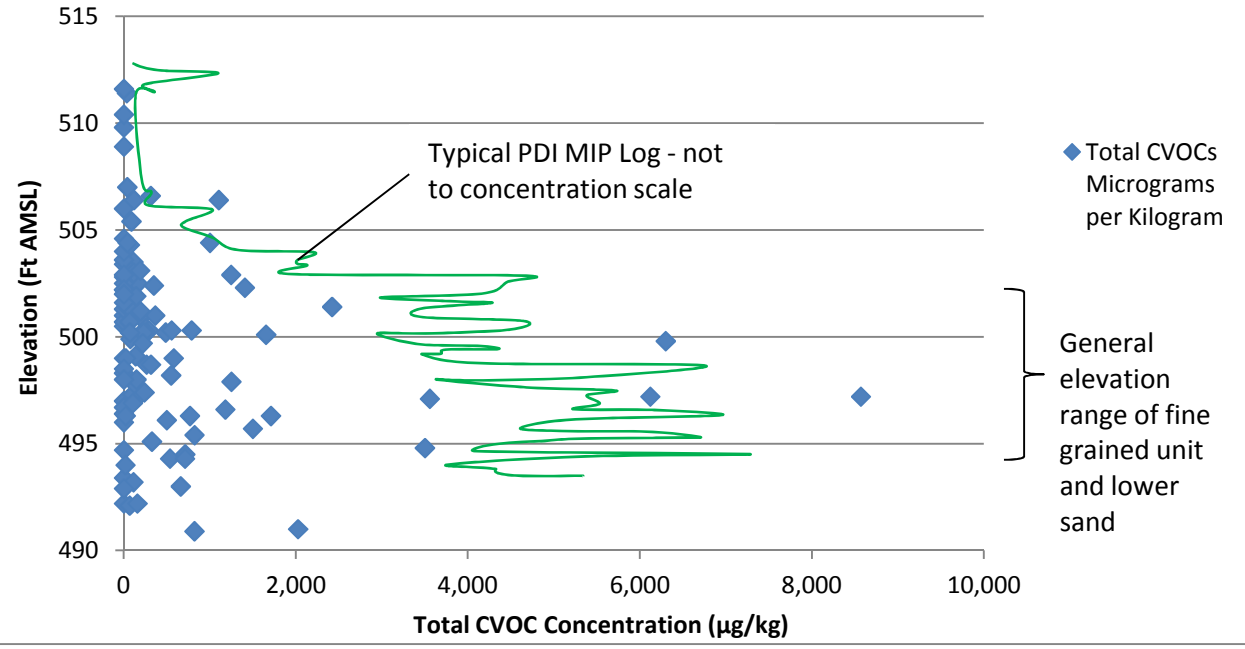
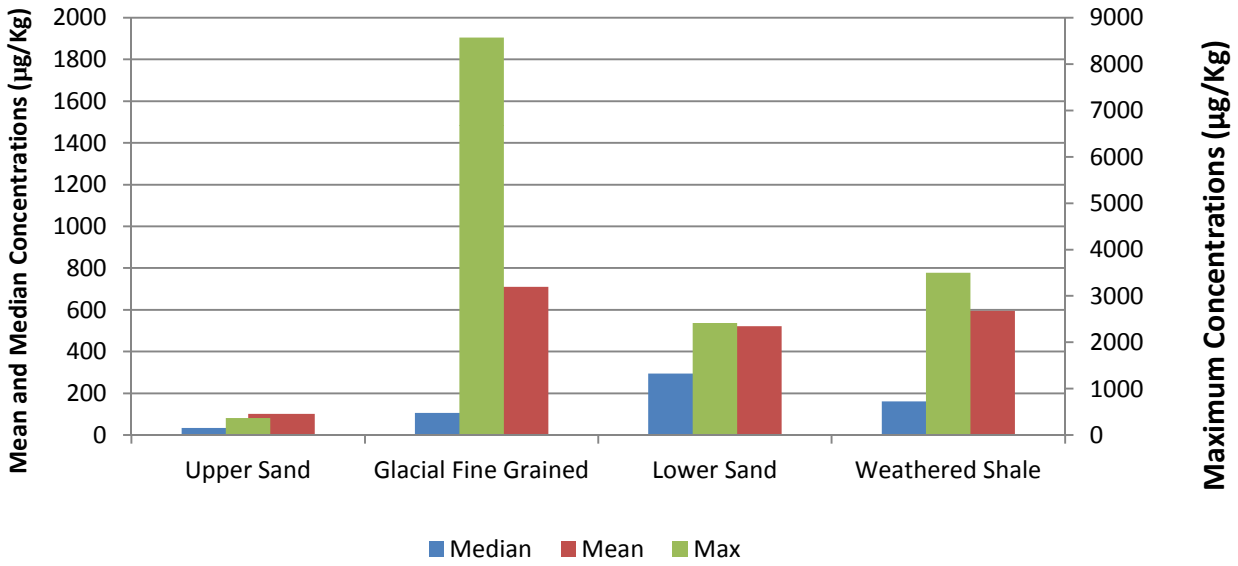


Figure 4-7B - Concentration Statistics Versus Soil Type



SOIL CONCENTRATIONS VERSUS ELEVATION AND SOIL TYPE

BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

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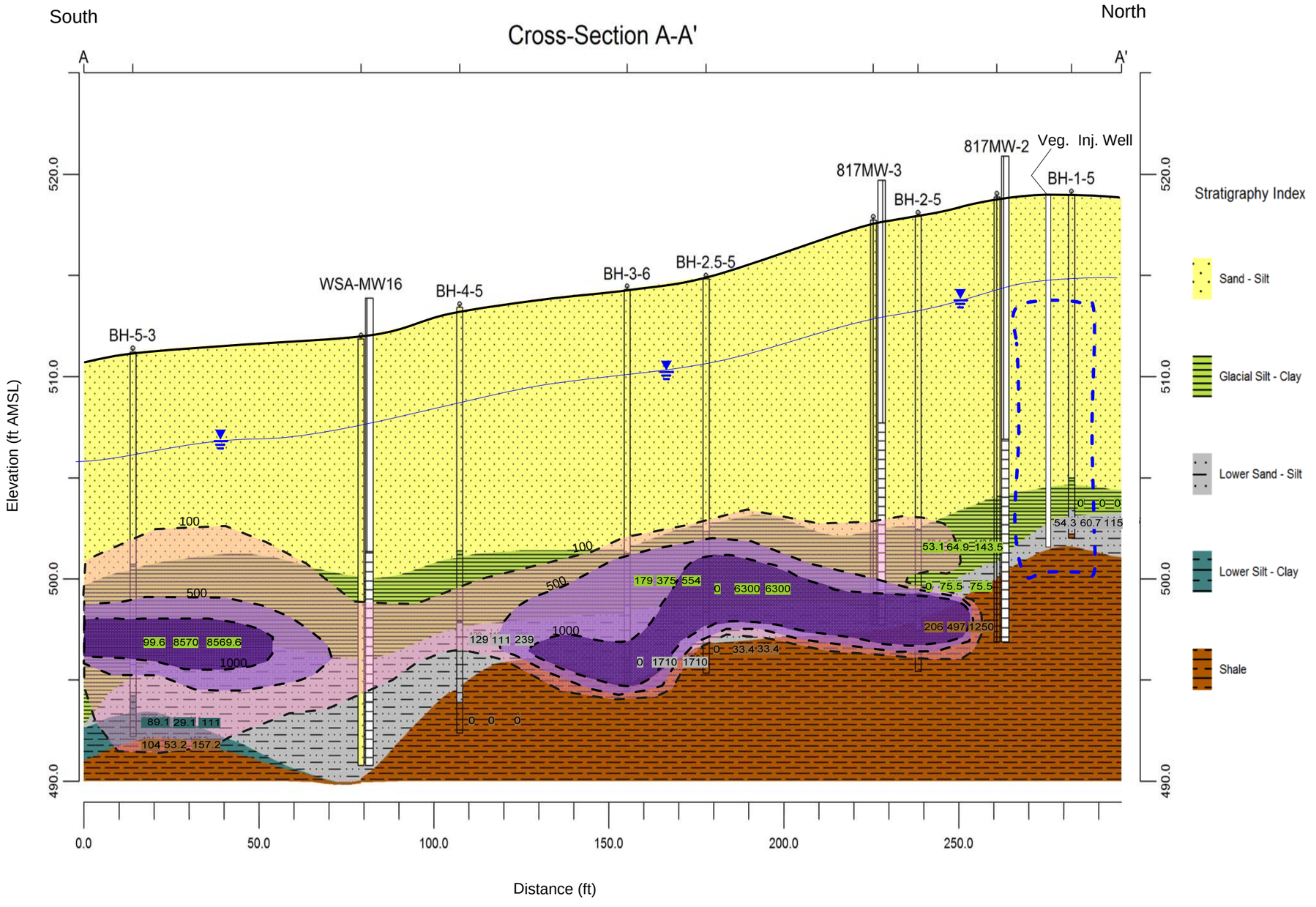
40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

FIGURE 4-7



Legend:

Vegetable Oil Injection Area

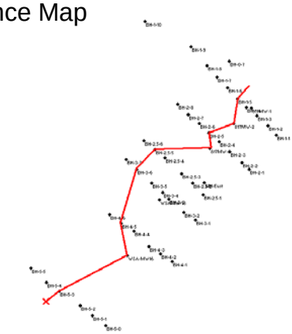
Notes:

Value adjacent to the boring are PCE, TCE, and total CVOCs (µg/kg), respectively.

Contours represent approximate total CVOC concentations: 100, 500, 1000 µg/kg.

Vertical Exageration = x 5.8

Reference Map



Title:

FIGURE 4-8
CROSS SECTION A-A'
ALONG APPROXIMATE PLUME CENTERLINE
WITH SOIL CONCENTRATIONS

Building 817/WSA 2014 SI Report
Former Griffiss Air Force Base
Rome, New York

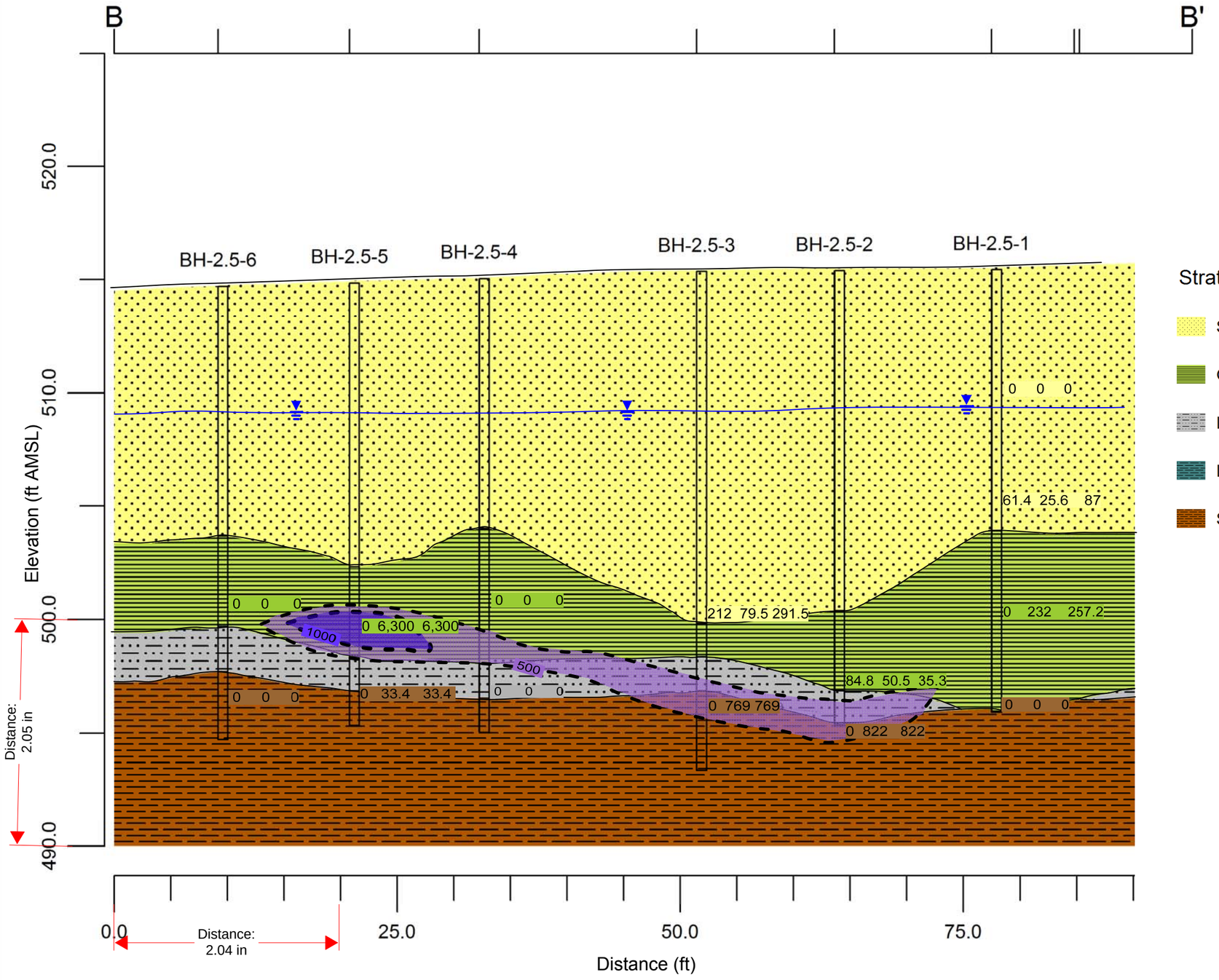
PREPARED BY:

PARSONS

Drawn by: JWS	Date: 11/5/14
Project Manager: JHL	Date: 11/5/14

File name: Section A-A_V3.srf

CROSS SECTION B-B'



Stratigraphy Index

- Sand - Silt
- Glacial Silt - Clay
- Lower Sand - Silt
- Lower Silt - Clay
- Shale

Notes:

Values adjacent to borings are PCE, TCE and TVOC (µg/Kg), respectively

Contours represent 500 and 1000 µg/Kg.

Vertical exaggeration = x 2.0

Reference Map:

Title:

FIGURE 4-9
CROSS SECTION B-B'
WITH SOIL CONCENTRATIONS

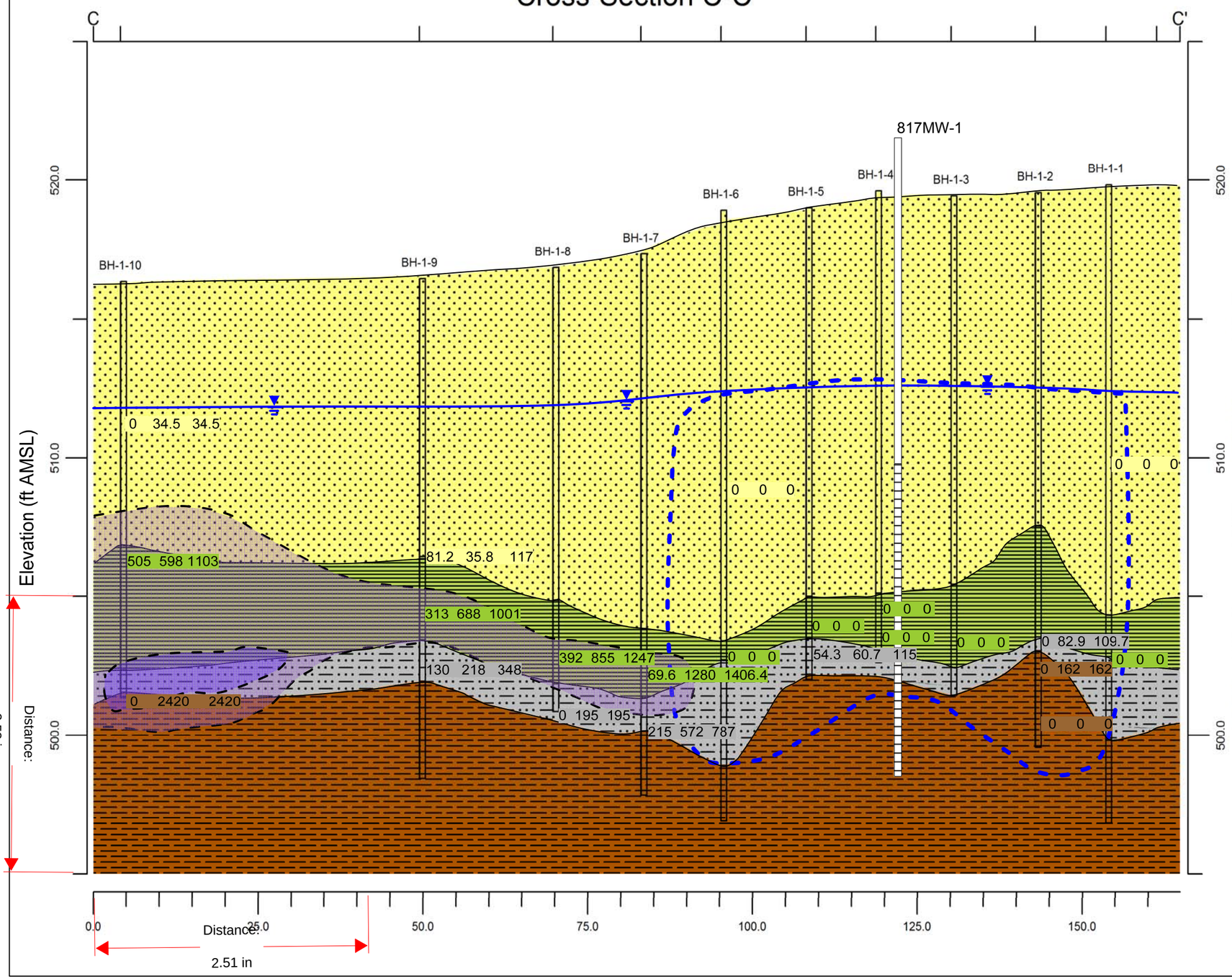
BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PREPARED BY:

PARSONS

Drawn by:	JWS	Date:	11/5/14
Project Manager:	JHL	Date:	11/5/14
File name:	Section B-B'.srf		

Cross-Section C-C'



Stratigraphy Index

- Sand - Silt
- Glacial Silt - Clay
- Lower Sand - Silt
- Lower Silt - Clay
- Shale

Notes:

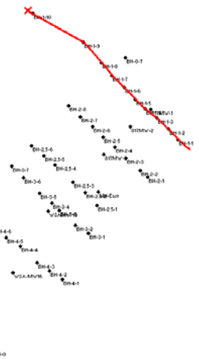
Values adjacent to borings are PCE, TCE and TVOC (µg/Kg), respectively

Contours represent 1000 and 2000 µg/kg.

Vertical exaggeration = x 4.2

Approximate Treatment Area (dashed when inferred)

Reference Map:



Title:

FIGURE 4-10
CROSS SECTION C-C'
ALONG HIGHEST SOIL CONCENTRATION

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FORMER GRIFFISS AIR FORCE BASE
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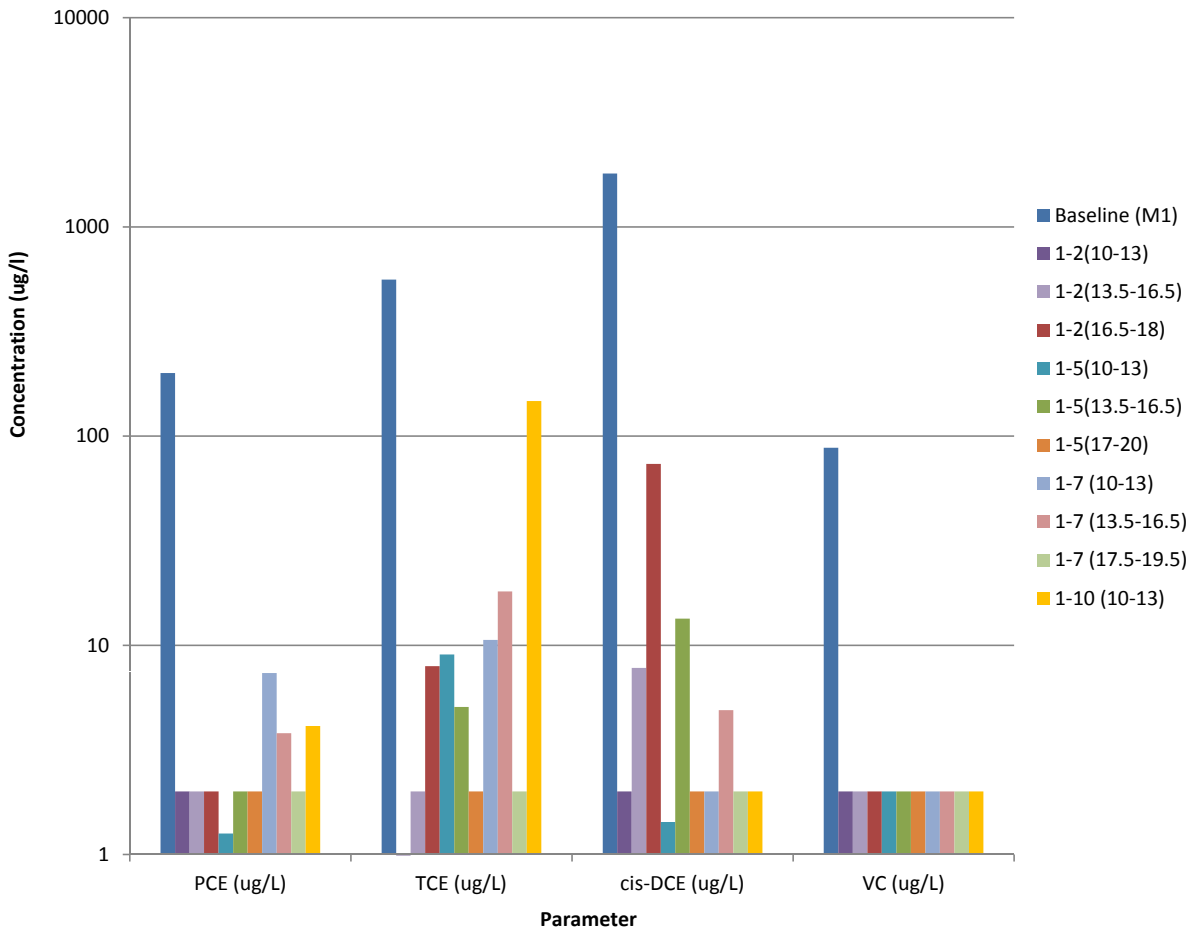
Project Manager: JHL	Date: 11/5/14
File name: Section C-C.srf and Rckwks Model 5	

Groundwater Grab Sample Concentrations - Baseline Sample (M1- from PDI) Compared with All September 2014 Treatment Area Transect 1 Samples



2014 GROUNDWATER COMPARED WITH BASELINE (2006) IN TREATMENT AREA

BUILDING 817/WSA 2014 SI REPORT

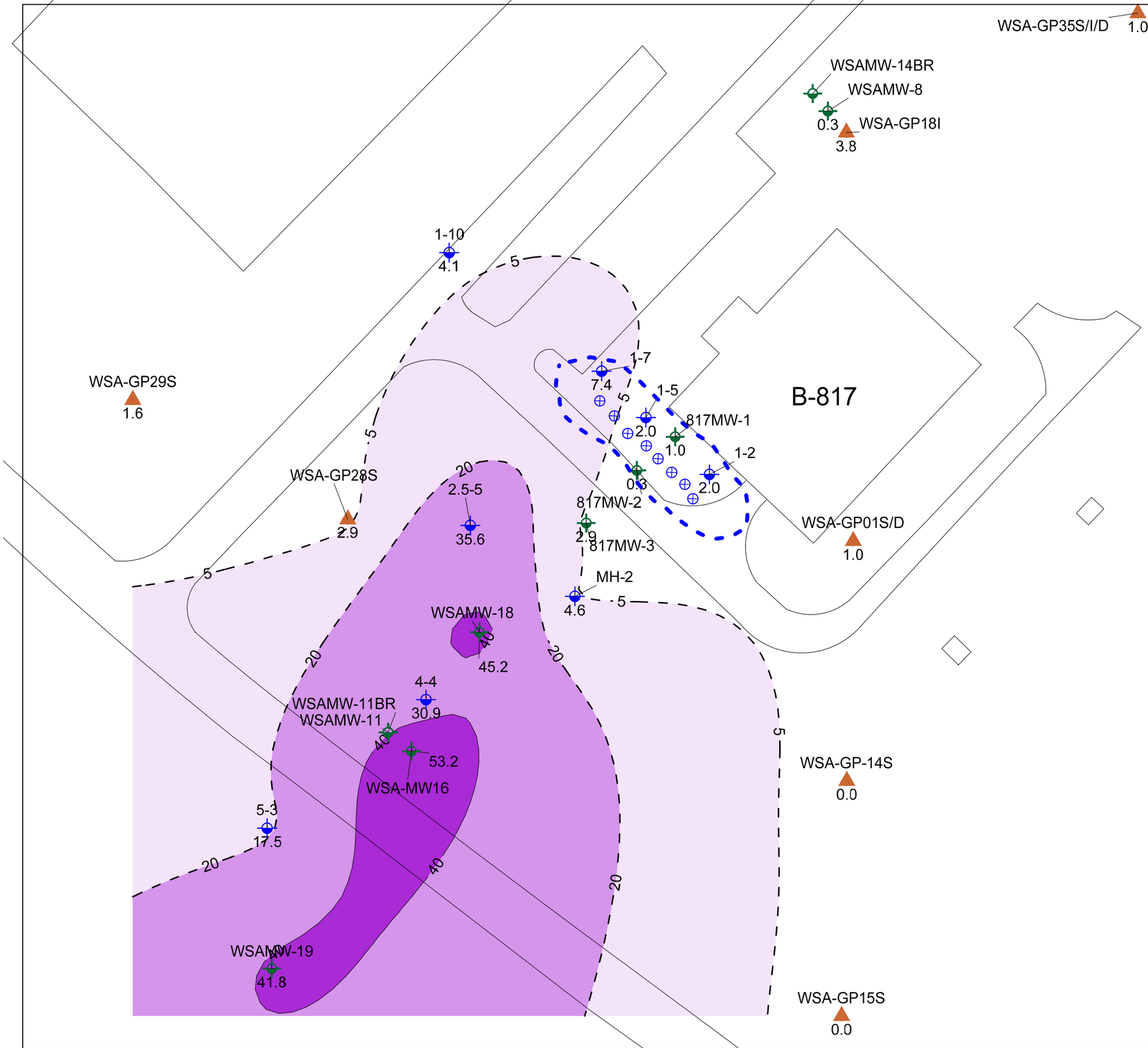
FORMER GRIFFISS AIR FORCE BASE

ROME, NEW YORK

PARSONS

40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

November 2014 | **FIGURE 4-11**



Notes:

PDI Grab samples that bound the impacted area were used in 2014 contouring assuming outside areas are similar concentrations

Legend

- Treatment Injection Point
- Well Location
- PDI groundwater sample (µg/L)
- 2014 Groundwater Sample (µg/L)

Color Scale (µg/L)

40
20
5

Scale Bar

0 25 50 75 100

Feet

Title:

FIGURE 4-12
PCE GROUNDWATER CONCENTRATION
2014 SUPPLEMENTAL INVESTIGATION
AND SEPT. 2014 MW RESULTS

Building 817/WSA 2014 SI Report
Former Griffiss Air Force Base
Rome, New York

PREPARED BY:

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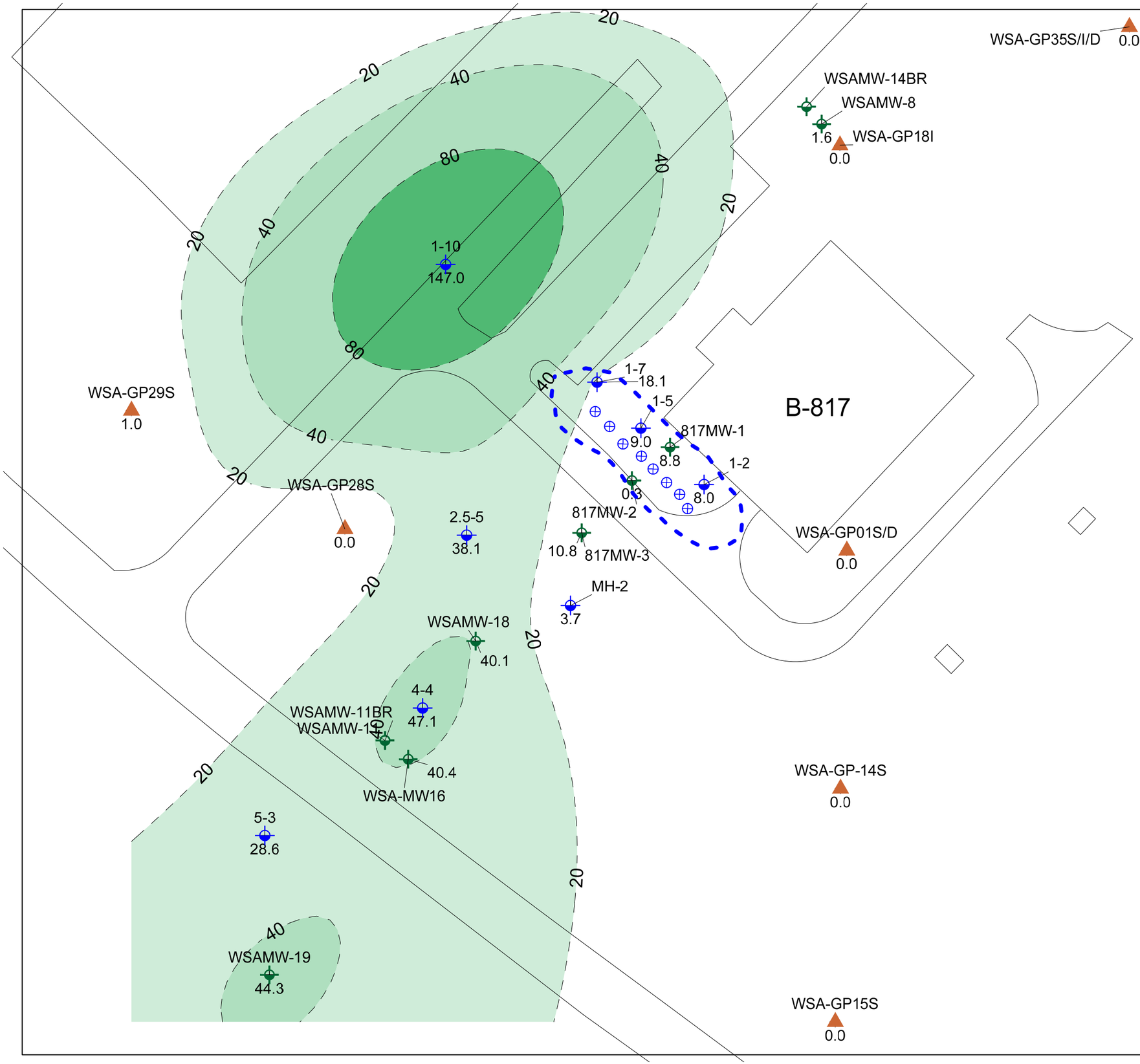
Drawn by:	JWS	Date:	12/30/14
Project Manager:	JHL	Date:	12/30/14

File name: GW-PCE 2014 wPDI_2.srf



Notes:

PDI Grab samples that bound the impacted area were used in 2014 contouring assuming outside areas are similar concentrations

Color Scale (µg/L)

80
40
20

Legend

- Treatment Injection Point
- Well Location
- PDI groundwater sample (µg/L)
- 2014 Groundwater Sample (µg/L)

Scale

0 25 50 75 100

Feet

Title:

FIGURE 4-13
TCE GROUNDWATER CONCENTRATION
2014 SUPPLEMENTAL INVESTIGATION
AND SEPT. 2014 MW RESULTS

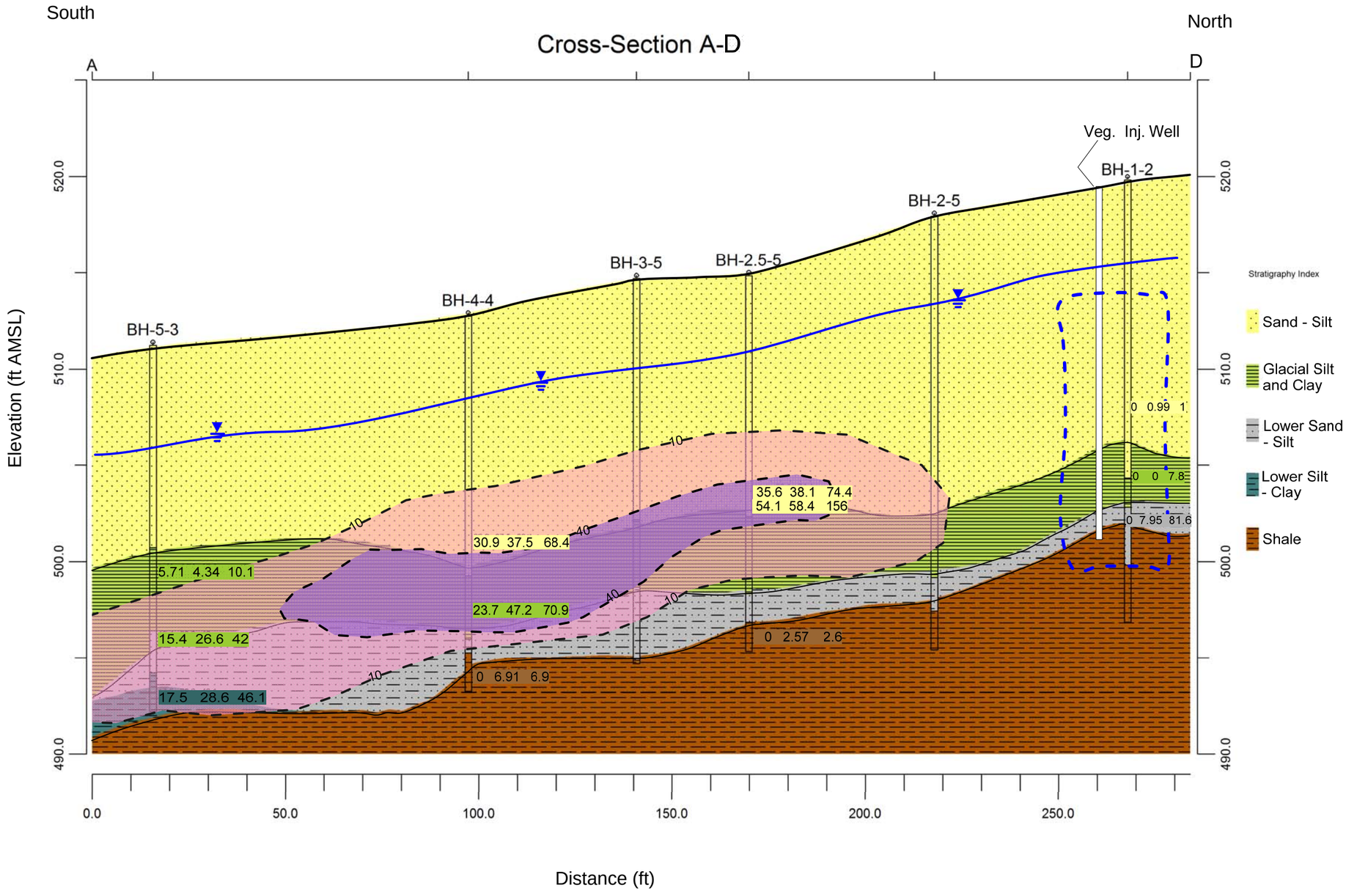
BUILDING 817/WSA 2014 SI REPORT
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

PREPARED BY:

PARSONS

Drawn by:	JWS	Date:	12/30/14
Project Manager:	JHL	Date:	12/30/14

File name: GW-TCE 2014 wPDI and 2014MWs_v2.srf



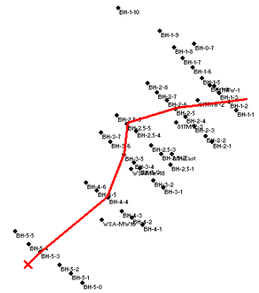
Notes:

Values adjacent to borings are PCE, TCE and total CVOC (µg/L), respectively

Contours are TCE (µg/L)

Vertical exaggeration = x 5.0

Reference Map



Title:

FIGURE 4-14
CROSS SECTION A - D'
ALONG APPROXIMATE PLUME CENTERLINE
WITH GROUNDWATER SAMPLE RESULTS

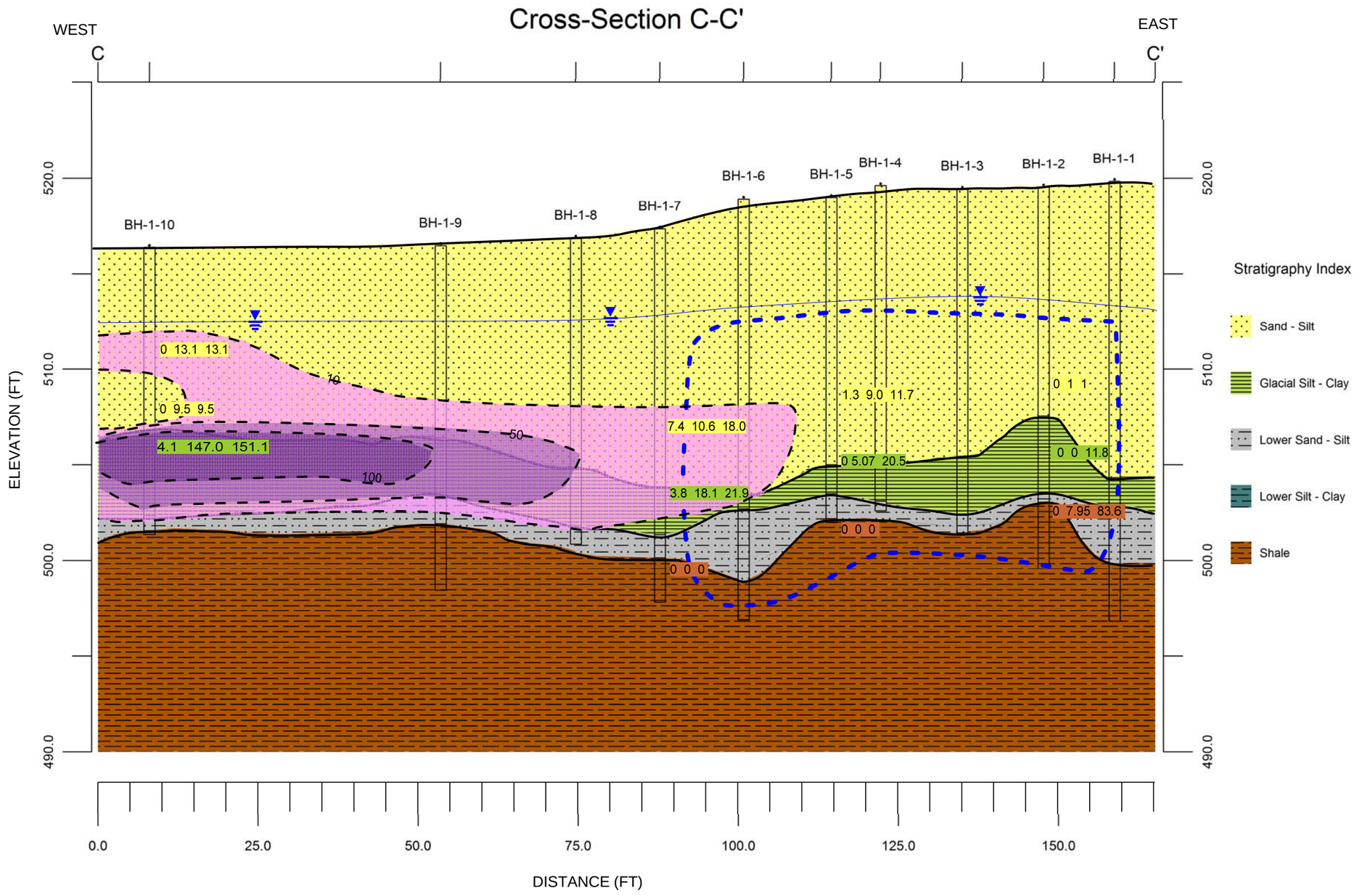
Building 817/WSA 2014 SI Report
Former Griffiss Air Force Base
Rome, New York

PREPARED BY:

PARSONS

Drawn by:	JWS	Date:	12/30/14
Project Manager:	JHL	Date:	12/30/14

File name: Section A-D - withGWTCEconc.srf



Notes:

Values adjacent to borings are PCE, TCE and total CVOCs (µg/L), respectively. At BH-1-2 and BH-1-5 DCE was detected therefore total CVOCs is greater than the sum of PCE and TCE. These were amongst the few locations where DCE was detected at appreciable concentrations.

Contours are TCE (µg/L)

Vertical Exaggeration = x 3.0

Approximate Treatment Area

Title:

FIGURE 4-15
CROSS SECTION C-C'
ALONG APPROXIMATE PLUME CENTERLINE
WITH GROUNDWATER SAMPLE RESULTS

Building 817/WSA 2014 SI Report
Former Griffiss Air Force Base
Rome, New York

PREPARED BY:

PARSONS

Drawn by:	JWS	Date:	12/30/14
Project Manager:	JHL	Date:	12/30/14

File name: Section C-C_GW_TCE.srf

TABLES

Table 4-1
Summary of Positive Results for Soil Investigation

Analyte	Sample Name	1-10-15	2-1-14	2-2-14	2-2-17	2-3-17	2-3-18	2-4-17	2-4-18	2-5-16
	Lab Sample ID	SEI-127	SEI-25	SEI-22	SEI-21	SEI-19	SEI-18	SEI-16	SEI-15	SEI-14
	Date	8/15/2014	8/12/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014
Volatile (8260C)	Depth (ft)	15	14	14	17	17	18	17	18	16
PCE		81.6 U	79.8 U	93.7 U	75 U	77.1 U	90.1 U	58.0 J	79.5 U	53.1 J
TCE		2420	71.1 J	40.7 J	41.3 J	107	264	134	229	64.9 J
cis-1,2-DCE		81.6 U	79.8 U	93.7 U	75 U	77.1 U	90.1 U	0.0 U	79.5 U	25.5 J
trans-1,2-DCE		81.6 U	79.8 U	93.7 U	75 U	77.1 U	90.1 U	0.0 U	79.5 U	83.7 U
VC		81.6 U	79.8 U	93.7 U	75 U	77.1 U	90.1 U	0.0 U	79.5 U	83.7 U

Analyte	Sample Name	2-5-18	2-5-20	2-6-17	2-7-17	2-7-19	2-8-10	2-8-20	2.5-1-10	2.5-1-15
	Lab Sample ID	SEI-12	SEI-11	SEI-13	SEI-60	SEI-61	SEI-132	SEI-134	SEI-97	SEI-98
	Date	8/11/2014	8/11/2014	8/11/2014	8/13/2014	8/13/2014	8/15/2014	8/15/2014	8/14/2014	8/14/2014
Volatile (8260C)	Depth (ft)	18	20	17	17	19	10	20	10	15
PCE		ND	206	41.9	173	178	219	101 U	61.4 J	85.6 U
TCE		75.5	497	24.7	313	308	93.9 J	1180	25.6 J	232
cis-1,2-DCE		ND	547	72.8 U	83.2 U	63.6 J	125 U	101 U	85.3 U	25.2 J
trans-1,2-DCE		ND	92.1 U	72.8 U	83.2 U	92.9 U	125 U	101 U	85.3 U	85.6 U
VC		ND	92.1 U	72.8 U	83.2 U	92.9 U	125 U	101 U	85.3 U	85.6 U

Notes:
PCE: tetrachloroethene
TCE: trichloroethene
DCE: dichloroethene
VC: vinyl chloride
U: Non Detect
J: Estimated
All results in µg/kg
Sample Numbering System: Transect Number - Boring Number - Depth (feet)

Table 4-1
Summary of Positive Results for Soil Investigation

Analyte	Sample Name	2.5-2-18	2.5-2-20	2.5-3-15	2.5-3-19	2.5-5-15	2.5-5-18	3-1-15	3-1-18
	Lab Sample ID	SEI-94	SEI-95	SEI-92	SEI-93	SEI-86	SEI-87	SEI-26	SEI-27
	Date	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/12/2014	8/12/2014
Volatile (8260C)	Depth (ft)	18	20	15	19	15	18	15	18
PCE		84.8	68.5 U	212	61.2 U	73.1 U	49.1 U	39.6 J	76.1 U
TCE		50.5 J	822	79.5	769	6300	33.4 J	29.8 J	163
cis-1,2-DCE		78.9 U	68.5 U	77.9 U	61.2 U	73.1 U	49.1 U	75.4 U	76.1 U
trans-1,2-DCE		78.9 U	68.5 U	77.9 U	61.2 U	73.1 U	49.1 U	75.4 U	76.1 U
VC		78.9 U	68.5 U	77.9 U	61.2 U	73.1 U	49.1 U	75.4 U	76.1 U

Analyte	Sample Name	3-2-16	3-2-19	3-3-16	3-4-16	3-4-19	3-5-15	3-5-16	3-6-14
	Lab Sample ID	SEI-28	SEI-29	SEI-30	SEI-32	SEI-33	SEI-36	SEI-37	SEI-34
	Date	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014
Volatile (8260C)	Depth (ft)	16	19	16	16	19	15	16	14
PCE		71.2 J	72.6 U	79 U	136	151 U	104	96.3	179
TCE		64.7 J	499	22.5 J	128	1500	116	218	375
cis-1,2-DCE		72.3 U	72.6 U	79 U	64.1 U	151 U	75.1 U	66.9 U	70.6 U
trans-1,2-DCE		72.3 U	72.6 U	79 U	64.1 U	151 U	75.1 U	66.9 U	70.6 U
VC		72.3 U	72.6 U	79 U	64.1 U	151 U	75.1 U	66.9 U	70.6 U

Notes:
PCE: tetrachloroethene
TCE: trichloroethene
DCE: dichloroethene
VC: vinyl chloride
U: Non Detect
J: Estimated
All results in µg/kg
Sample Numbering System: Transect Number - Boring Number - Depth (feet)

Table 4-1
Summary of Positive Results for Soil Investigation

Analyte	Sample Name	3-6-18	3-7-11	3-7-14	3-7-19	4-1-18	4-2-16	4-2-18
	Lab Sample ID	SEI-35	SEI-62	SEI-63	SEI-64	SEI-52	SEI-49	SEI-50
	Date	8/12/2014	8/13/2014	8/13/2014	8/13/2014	8/12/2014	8/12/2014	8/12/2014
Volatile (8260C)	Depth (ft)	18	11	14	19	18	16	18
PCE		ND	151	720	69.2 U	158	79.9 U	76.3 U
TCE		1710	38.0 J	933	326	554	22.8 J	536
cis-1,2-DCE		78.1 U	98.8 U	70.1 U	69.2 U	77.9 U	79.9 U	76.3 U
trans-1,2-DCE		78.1 U	98.8 U	70.1 U	69.2 U	77.9 U	79.9 U	76.3 U
VC		78.1 U	98.8 U	70.1 U	69.2 U	77.9 U	79.9 U	76.3 U

Analyte	Sample Name	4-3-15	4-3-18	4-4-15	4-4-18	4-5-16	4-6-14	4-6-19
	Lab Sample ID	SEI-47	SEI-48	SEI-45	SEI-46	SEI-43	SEI-39	SEI-40
	Date	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014
Volatile (8260C)	Depth (ft)	15	18	15	18	16	14	19
PCE		52.4	318	81.1	70.5 J	129	323	67.5 U
TCE		47.2	392	42.9 J	3430	110	257	18.9 J
cis-1,2-DCE		64.7 U	76.1 U	70.9 U	74.2 U	71.8 U	76.6 U	67.5 U
trans-1,2-DCE		64.7 U	76.1 U	70.9 U	74.2 U	71.8 U	76.6 U	67.5 U
VC		64.7 U	76.1 U	70.9 U	74.2 U	71.8 U	76.6 U	67.5 U

Notes:
PCE: tetrachloroethene
TCE: trichloroethene
DCE: dichloroethene
VC: vinyl chloride
U: Non Detect
J: Estimated
All results in µg/kg
Sample Numbering System: Transect Number - Boring Number - Depth (feet)

Table 4-1
Summary of Positive Results for Soil Investigation

Analyte	Sample Name	5-0-10	5-0-13	5-0-20	5-2-14	5-1-14	5-2-14	5-2-19
	Lab Sample ID	SEI-101	SEI-102	SEI-103	SEI-55	SEI-53	SEI-55	SEI-56
	Date	8/14/2014	8/14/2014	8/14/2014	8/12/2014	8/12/2014	8/12/2014	8/12/2014
Volatile (8260C)	Depth (ft)	10	13	20	14	14	14	19
PCE		267	82.9 J	235	66.8 U	101	437	42.8 J
TCE		98.0	62.9 J	1790	3120	6020	66.8 U	25.2 J
cis-1,2-DCE		84.5 U	86.8 U	79.4 U	66.8 U	69 U	66.8 U	80.1 U
trans-1,2-DCE		84.5 U	86.8 U	79.4 U	66.8 U	69 U	66.8 U	80.1 U
VC		84.5 U	86.8 U	79.4 U	66.8 U	69 U	66.8 U	80.1 U

Analyte	Sample Name	5-3-14	5-3-18	5-3-19	5-4-14	5-4-20	5-5-18
	Sample ID	SEI-57	SEI-58	SEI-59	SEI-76	SEI-78	SEI-81
	Date	8/12/2014	8/12/2014	8/12/2014	8/13/2014	8/13/2014	8/13/2014
Volatile (8260C)	Depth (ft)	14	18	19	14	20	18
PCE		99.6	81.9	104	75.1 J	237	58.1
TCE		8470	29.1	53.2 J	29.8 J	583	602
cis-1,2-DCE		87 U	77.6 U	89.5 U	88.9 U	78.9 U	75.9 U
trans-1,2-DCE		87 U	77.6 U	89.5 U	88.9 U	78.9 U	75.9 U
VC		87 U	77.6 U	89.5 U	88.9 U	78.9 U	75.9 U

Notes:
PCE: tetrachloroethene
TCE: trichloroethene
DCE: dichloroethene
VC: vinyl chloride
U: Non Detect
J: Estimated
All results in µg/kg
Sample Numbering System: Transect Number - Boring Number - Depth (feet)

Table 4-2
Summary of Positive Results for Groundwater Investigation

Analyte	Site Cleanup Goal[1]	Sample Name	1-2(10-13)	1-2(13.5-16.5)	1-2(16.5-18)	1-5(10-13)	1-5(13.5-16.5)	1-7 (10-13)	1-7 (13.5-16.5)
		Lab Sample ID	SEI-70	SEI-71	SEI-72	SEI-73	SEI-74	SEI-104	SEI-105
		Date	8/13/2014	8/13/2014	8/13/2014	8/13/2014	8/13/2014	8/14/2014	8/14/2014
Volatile (8260C)		Depth (ft)	10-13	13.5-16.5	16.5-18	10-13	13.5-16.5	10-13	13.5-16.5
PCE	5		2 U	2 U	2 U	1.26 J	2 U	7.37	3.80
TCE	5		0.990 J	2 U	7.95	9.03	5.07	10.6	18.1
cis-1,2-DCE	5		2 U	7.80	73.6	1.43 J	13.4	2 U	4.90
trans-1,2-DCE	5		2 U	2 U	2 U	2 U	2 U	2 U	2 U
VC	2		2 U	2 U	2 U	2 U	2 U	2 U	2 U

Analyte	Site Cleanup Goal[1]	Sample Name	1-10 (5-8)	1-10 (8-10)	1-10 (10-13)	2.5-5 (10-13)	2.5-5 (13.5-16.5)	2.5-5 (17-20)	4-4 (10-13)
		Sample ID	SEI-128	SEI-130	SEI-129	SEI-117	SEI-118	SEI-119	SEI-120
		Date	8/15/2014	8/15/2014	8/15/2014	8/15/2014	8/15/2014	8/15/2014	8/15/2014
Volatile (8260C)		Depth (ft)	5-8	8-10	10-13	10-13	13.5-16.5	17-20	10-13
PCE	5		2 U	2 U	4.11	35.6	2 U	2 U	30.9
TCE	5		13.1	9.54	147	38.1	7.03	2.57	37.5
cis-1,2-DCE	5		2 U	2 U	2 U	0.680	2 U	2 U	2 U
trans-1,2-DCE	5		2 U	2 U	2 U	2 U	2 U	2 U	2 U
VC	2		2 U	2 U	2 U	2 U	2 U	2 U	2 U

1 - New York State Department of Environmental Conservation Class GA Groundwater Quality Standards
U: Not Detected
J: Estimated
PCE: tetrachloroethene
TCE: trichloroethene
DCE: dichloroethene
VC: vinyl chloride
µg/L - microgram(s) per liter
Sample Numbering System: Transect Number - Boring Number(Depth in feet)
MH-2: Manhole sample

Table 4-2
Summary of Positive Results for Groundwater Investigation

Analyte	Site Cleanup Goal[1]	Sample Name	4-4 (13.5-16.5)	4-4 (17-20)	5-3 (10-13)
		Lab Sample ID	SEI-121	SEI-122	SEI-106
		Date	8/15/2014	8/15/2014	8/14/2014
Volatile (8260C)		Depth (ft)	13.5-16.5	17-20	10-13
PCE	5		23.7	2 U	5.71
TCE	5		47.2	6.91	4.34
cis-1,2-DCE	5		2 U	2 U	2 U
trans-1,2-DCE	5		2 U	2 U	2 U
VC	2		2 U	2 U	2 U

Analyte	Site Cleanup Goal[1]	Sample Name	5-3 (13.5-16.5)	5-3 (17-19)	MH-2
		Sample ID	SEI-107	SEI-108	SEI-109
		Date	8/14/2014	8/14/2014	8/14/2014
Volatile (8260C)		Depth (ft)	13.5-16.5	17-19	0.01
PCE	5		15.4	17.5	4.60
TCE	5		26.6	28.6	3.74
cis-1,2-DCE	5		2 U	2 U	2 U
trans-1,2-DCE	5		2 U	2 U	2 U
VC	2		2 U	2 U	2 U

1 - New York State Department of Environmental Conservation Class GA Groundwater Quality Standards
U: Not Detected
J: Estimated
PCE: tetrachloroethene
TCE: trichloroethene
DCE: dichloroethene
VC: vinyl chloride
µg/L - microgram(s) per liter
Sample Numbering System: Transect Number - Boring Number(Depth in feet)
MH-2: Manhole sample

APPENDIX A

BORING LOGS

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 0 Boring 7**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: East of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		6	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.5	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014/1600
Date/Time Finish: August 14, 2014/1630

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		24"	0	SM	0	0-4"- Moist, stiff, dark brown, topsoil, roots. 4-8"-Dry, stiff, dark brown, SILT and fine Sand, some roots. 8-24"- Dry, dense, medium brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-15"-Moist, dense, medium brown, fine to medium SAND. 15-30"-Wet, dense, dark brown, fine to medium SAND, some coarse sand	
					6		
					7		
					8		
					9		
MC		36"	0	SW	10	0-30"-Wet, dense, medium brown, fine to medium SAND, some coarse sand. 30-36"-Wet, dense, medium brown, fine to coarse SAND and fine to coarse Gravel	
					11		
					12		
					13		
					14		
MC		54"	0	GM	15	0-2"-Wet, stiff, gray, SILT and fine to medium Sand, some weathered shale. 2-54"-Wet, loose, gray, weathered shale, little fine to coarse sand. Refusal at 19.5 ft	
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PARSONS
DRILLING RECORD

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

BORING/ WELL NO. Page 1 of 2
Transect 1 Boring 1
Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-30"-Dry, loose, brown, medium to fine SAND, trace grass/roots, trace silt.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-8"- Moist, loose, brown, medium to fine SAND, trave gravel. 8-9"-Moist, stiff, brown, SILT, some fine sand. 9-30"-Moist, loose, brown, medium to fine SAND, trace silt.	Sample taken at 10" Sample ID: 1-1-10
					6		
					7		
					8		
					9		
MC		24"	0	SM	10	0-22"-Wet, loose, brown, medium to fine SAND. 22-24"-Wet, loose, fine to coarse SAND, trace fine gravel.	
					11		
					12		
					13		
					14		
MC		48"	0	SM	15	0-5"-Wet, brown, loose, medium to fine SAND, trace silt. 5-14"- Wet, stiff, brown-dark brown, SILT and medium to fine Sand, trace fine gravel, trace clay. 14-48"-Wet, loose, brown, medium to fine SAND.	
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD
MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 1 Boring 1**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	GM	20	0-29"-Wet, loose, gray, weathered shale, trace fine gravel. Refusal at 23ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-3"-Moist,brown, topsoil, roots. 3-30"-Dry, loose, light brown, medium to fine SAND, trace silt, trace fine gravel.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-3"-Dry, loose, light brown, fine SAND, trace silt. 3-36"-Moist, loose, brown, medium to fine SAND.	Sample taken at 10" Sample ID: 1-1-10
					6		
					7		
					8		
					9		
MC		12"	0	SM	10	0-5"-Wet, loose, brown, medium to fine SAND. 5-12"-Wet, loose, light gray, medium to fine SADN and weathered rock, trace weathered shale.	
					11		
					12		
					13		
					14		
MC		48"	0	SM	15	0-8"-Wet, stiff, brown, SILT, some fine sand, trace fine gravel. 8-16"-Wet, loose, medium brown, medium to fine SAND, some weathered shale. 16-48"-Wet, loose, gray, weathered shale, little medium to fine sand. Refusal at 20ft.	Sample taken at 17' Sample ID: 1-2-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		18	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	SM	0	0-6"-Moist, brown, topsoil, grass. 6-18"-Dry, loose, light brown, medium to fine SAND, trace cobbles. 18-36"-Dry, dense, brown, fine SAND, trace medium sand.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-12"-Dry, dense, brown, fine Sand, trace medium sand. 12-30"-Moist, dense, medium brown, medium to fine SAND.	
					6		
					7		
					8		
					9		
MC		36"	0	SM	10	0-12"-Wet, dense, medium brown, medium to fine SAND, trace fine gravel. 12--36"-Wet, dense, light gray, fine to coarse SAND and fine to coarse Gravel, trace weathered rock.	
					11		
					12		
					13		
					14		
MC		36"	0	SM	15	0-2"-Wet, loose, light gray, fine to coarse SAND and fine to coarse Gravel, trace weathered rock. 2-15"-Wet, stiff, brown, SILT, trace fine sand. 15-32"-Wet, dense, medium brown, medium to fine SAND, some weathered shale. 32-36"-Wet, loose, gray, weathered shale, some medium to fine sand. Refusal at 18ft.	Sample taken at 16' Sample ID: 1-3-16
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 1 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		17	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-6"-Moist, dark brown, topsoil, roots. 6-30"-Dry, dense, medium brown, medium to fine SAND. 30-48"-Dry, loose, light brown, fine SAND, trace medium sand, trace silt.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-12"-Dry, loose, light brown, fine SAND, some medium sand. 12-24"-Moist, loose, brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		30"	0	SM	10	0-8"-Wet, loose, medium brown, medium to fine SAND, some coarse sand. 8-28"-Wet, brown-light gray, fine to coarse SAND, some fine to coarse gravel, trace cobbles. 28-30"-Wet, stiff, brown, SILT, some medium to fine sand.	Sample taken at 15' Sample ID: 1-4-15
					11		
					12		
					13		
					14		
MC		24"	0	SM	15	0-22"-Wet, stiff, brown, SILT, some fine sand, trace fine gravel. 22-24"-Wet, loose, brown, fine SAND, trace weathered rock. Refusal at 17ft.	Sample taken at 17' Sample ID: 1-4-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		17	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-6"-Moist, medium brown, topsoil, roots. 6-36"-Dry, loose, brown, medium to fine SAND. 36-42"-Dry, dense, light brown, fine SAND, some medium sand.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-12"-Dry, loose, light brown, fine SAND, some medium sand. 12-24"-Moist, dense, brown, medium to fine SAND.	
					6		
					7		
					8		
					9		
MC		36"	0.1	SM	10	0-8"-Wet, loose, dark brown-gray, fine to coarse SAND, trace fine gravel. 8-30"-Wet, dense, gray-brown, fine to coarse SAND, some fine to coarse gravel. 30-35"-Wet, dense, brown, fien to coarse GRAVEL, some fine to coarse sand. 35-36"-Wet, stiff, brown, SILT, some fine sand.	Sample taken at 15' Sample ID: 1-5-15
					11		
					12		
					13		
					14		
MC		24"	0	SM	15	0-6"-Wet, stiff, brown, SILT, some fine sand. 6-12"-Wet, dense, brown, fine SAND, some medium sand. 12-23"-Wet, dense, dark gray, medium to fine SAND, trace weathered shale. 23-24"-Wet, loose, gray, weathered shale.	Sample taken at 17' Sample ID: 1-5-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 1 Boring 6**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	SM	0	0-12"-Moist, brown, topsoil, roots. 12-36"-Moist, loose, brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-6"-Moist, dense, light brown, medium to fine SAND. 6-24"-Moist, loose, brown, medium SAND, some fine sand.	
					6		
					7		
					8		
					9		
MC		24"	0	SM	10	0-18"-Wet, loose, brown, medium to fine SAND. 18-24"-Wet, loose, gray-brown, fine to coarse SAND, trace cobbles.	Sample taken at 15' Sample ID: 1-5-15
					11		
					12		
					13		
					14		
MC		30"	0	SM	15	0-4"-Wet, loose, brown-gray, fine to coarse SAND and fine to coarse Gravel. 4-7"-Wet, stiff, brown, SILT and fine Sand. 7-30"-Wet, dense, dark brown, fine to medium SAND.	Sample taken at 17' Sample ID: 1-5-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 1 Boring 6**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		18"	0	GM	20	0-18"-Wet, loose, dark gray, weathered shale, some fine to coarse sand, trace fine to coarse gravel. Refusal at 22ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 7**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.5	ft bls
Additional Comments:			

Date/Time Start: August 13, 2014
Date/Time Finish: August 13, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-6"-Moist, dark brown, topsoil, roots. 6-22"-Moist, dense, dark brown, fine to coarse SAND, little fine gravel in 6-12"lens. 22-27"-Moist, dense, brown, fine SAND, some silt. 27-30"-Moist, dense, brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-15"-Moist, dense, brown, fine SAND, some medium sand. 15-30"-Moist, dense, medium brown, fine to medium SAND.	
					6		
					7		
					8		
					9		
MC		30"	0	SM	10	0-22"-Wet, dense, medium brown, fine to coarse SAND, some fine to coarse gravel. 22-30"-Wet, stiff, brown, SILT, some fine sand, trace fine gravel.	Sample taken at 15' Sample ID: 1-7-15
					11		
					12		
					13		
					14		
MC		36"	0	SM	15	0-6"-Wet, stiff, brown, SILT, some fine sand, some medium to fine gravel. 6-18"-Wet, loose, medium brown, fine to coarse SAND and fine to coarse Gravel, trace weathered shale. 18-36"-Wet, loose, gray, weathered and fine to coarse sand. Refusal at 19.5ft.	Sample taken at 17' Sample ID: 1-7-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 8**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		7	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		16	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	SM	0	0-8"-Dry, loose, gray, asphalt and related stone fill. 8-16"-Dry, loose, brown, fine to coarse SAND and fine to coarse Gravel. 16-36"-Moist, dense, medium brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-24"-Moist, dense, medium brown, medium to fine SAND. 24-30"- Wet, loose, brown, fine to coarse SAND and fine to coarse Gravel.	
					6		
					7		
					8		
					9		
MC		36"	0	SM-ML	10	0-18"-Wet, dense, medium brown, fine to coarse SAND, little fine gravel. 18-36"-Wet, stiff, brown, SILT and fine Sand.	Sample taken at 14' Sample ID: 1-8-14
					11		
					12		
					13		
					14		
MC		18"	0	SM	15	0-14"-Wet, dense, medium brown, fine to coarse SAND and Silt. 14-18"-Wet, loose, gray, weathered shale. Refusal at 16ft.	Sample taken at 16' Sample ID: 1-8-16
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 9**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		8	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		18	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-4"-Asphalt, related fill. 4-12"-Dry, loose, brown, SILT and fine to coarse Gravel. 12-42"-Dry, dense, medium brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-12"-Dry, dense, medium brown, medium to fine SAND. 12-24"-Moist, loose, brown, fine to coarse SAND and fine to coarse Gravel.	Sample taken at 10' Sample ID: 1-9-10
					6		
					7		
					8		
					9		
MC		42"	0	ML-SM	10	0-24"- Wet, stiff, brown, SILT, some fine sand, little fine gravel. 24-36"- Wet, dense, medium brown, fine to coarse SAND, trace fine to medium gravel. 36-42"- Wet, loose, gray, weathered shale and fine to coarse Sand.	Sample taken at 12' and 14' Sample IDs: 1-9-12 and 1-9
					11		
					12		
					13		
					14		
MC		30"	0	GM	15	0-30"-Wet, loose, gray, weathered shale. Refusal at 18ft.	
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 1 Boring 10**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		15	ft bls
Additional Comments:			

Date/Time Start: August 15, 2014
Date/Time Finish: August 15, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		24"	0	SM	0	0-6"-Asphalt, related fill. 6-12"-Wet, moist, loose, brown, fine to coarse SAND and fine to coarse Gravel. 12-24"-Moist, loose, medium brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-20"-Wet, loose, brown, fine to coarse SAND and fine to coarse Gravel, some silt. 20-24"-Wet, stiff, brown, SILT and fine to coarse Sand, some fine to coarse gravel.	Sample taken at 5' and 10' Sample ID: 1-10-5 and 1-1(
					6		
					7		
					8		
					9		
MC		36"	0	SM	10	0-30"-Wet, dense, brown, fine to coarse SAND and Silt, some fine to coarse gravel. 30-36"-Wet, dense, brown-gray, fine to coarse SAND, some weathered shale. Refusal at 15ft.	Sample taken at 15' Sample ID: 1-10-15
					11		
					12		
					13		
					14		
					15	End of Boring	
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 2 Boring 1**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-3"-Moist, brown, topsoil, roots. 3-36"-Dry, dense, light brown, medium to fine SAND, trace fine gravel. 36-42"-Dry, dense, medium brown, fine to coarse SAND, trace fine gravel.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-12"- Moist, dense, light brown, medium to fine SAND. 12-24"- Moist, dense, medium brown, fine to coarse SAND.	Sample taken at 10" Sample ID: 1-1-10
					6		
					7		
					8		
					9		
MC		48"	0	SM	10	0-12"- Wet, loose, dark brown, fine to coarse SAND. 12-36"-Wet, stiff, light brown, SILT and fine Sand, trace fine gravel. 36-48"-Wet, stiff, light brown, SILT, some fine sand, little clay, trace fine gravel.	
					11		
					12		
					13		
					14		
MC		54"	0	SM-ML	15	0-24"-Wet, stiff, light brown, SILT, some fine sand, little clay. 24-50"- Wet, dense, light brown, fine SAND and Silt, trace fine gravel. 50-54"-Wet, loose, gray, medium to fine SAND and medium to fine Gravel.	
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Transect 2 Boring 1

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		24"	0	GM	20	0-6"- Wet, loose, gray, medium to fine SAND and weathered shale. 6-24"-Wet, loose, gray, weathered shale. Refusal at 23ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 2 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-3"-Moist,brown, topsoil, roots. 3-40"-Dry, dense, light brown, medium to fine SAND, little fine gravel, trace cobbles. 40-42"- Dry, loose, light brown, medium to fine SAND, trace fine gravel.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	No Recovery.	
					6		
					7		
					8		
					9		
MC		36"	0	SM-ML	10	0-12"-Wet, loose, dark brown, fine to coarse SAND, trace fine gravel. 12-18"-Wet, loose, dark brown, fine to coarse SAND and fine to coarse Gravel. 18-22"-Wet, stiff, brown, SILT and fine Sand, trace fine gravel. 22-36"- Wet, stiff, brown, SILT, some fine sand, some clay, trace fine gravel.	Sample taken at 14' Sample ID: 2-2-14
					11		
					12		
					13		
					14		
MC		36"	0	ML	15	0-24"- Wet, very stiff, brown, SILT, some fine sand, some clay, trace fine gravel. 24-32"- Wet, stiff, brown, SILT and fine Sand. 32-36"- Wet, loose, gray, weathered shale, some fine to coarse sand.	Sample taken at 17' Sample ID: 2-2-17
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 2 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-8"-Moist, brown, topsoil, roots. 8-36"- Dry, dense, brown, medium to fine SAND, some coarse sand. 36-48"- Dry, dense, light brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-12"-Wet, loose, brown, medium to fine SAND, trace silt. 12-24"- Wet, dense, brown, medium to fine SAND, some silt. 24-36"- Wet, dense, dark brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		30"	0	SM	10	0-20"- Wet, loose, gray-brown, medium to fine SAND. 20-28"- Wet, loose, gray-brown, medium to fine SAND, some coarfse sand, trace fine gravel. 28-30"- Wet, loose, gray-brown, fine to coarse SAND and fine Gravel.	
					11		
					12		
					13		
					14		
MC		42"	0	SM	15	0-3"- Wet, dense, medium brown, medium to fine SAND, trace fine gravel. 3-9"- Wet, loose, medium brown, medium to fine SAND, little fine to coarse gravel, trace cobbles. 9-24"- Wet, stiff, brown, SILT, little fine sand, little clay. 24-42"- Wet, dense, medium brown, medium to fine SAND, little silt.	Sample taken at 16' Sample ID: 1-3-16
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 — **Transect 2 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	GM	20	0-36"- Wet, loose, gray, weathered shale and fine to coarse sand. Refusal at 23ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 2 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		7	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-6"-Moist, dark brown, topsoil, roots. 6-42"- Dry, dense, light brown, fine to coarse SAND, trace fine gravel. 42-48"- Moist, loose, light brown, medium to fine SAND, little coarse sand.	
					1		
					2		
					3		
					4		
MC		42'	0	SM	5	0-6"- Moist, dense, brown, fine SAND, trace silt. 6-24"- Wet, dense, brown, fine to medium SAND, little silt. 24-42"- Wet, loose, dark brown, medium to fine SAND, trace coarse sand.	
					6		
					7		
					8		
					9		
MC		36"	0	SM	10	0-36"- Wet, loose, gray, medium to fine SAND, some coarse sand.	Sample taken at 15' Sample ID: 1-4-15
					11		
					12		
					13		
					14		
MC		54"	0	ML	15	0-12"- Wet, stiff, brown-orange mottling, SILT and fine Sand. 12-48"- Wet, very stiff, brown, SILT, some clay, little fine sand. 48-54"- Wet, stiff, brown, SILT, some fine sand, trace clay.	Sample taken at 17' Sample ID: 1-4-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 2 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		7	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	GM	20	0-6"- Wet, loose, gray, medium to fine sand and weathered shale. 6-30"- Wet, loose, gray, weathered shale, trace fine to coarse sand.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 1 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22.5	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-12"-Moist, brown, topsoil. 12-36"-Dry, dense, brown, fine to coarse SAND, trace fine gravel. 36-48"-Dry, loose, light brown, medium to find SAND, trace coarse sand.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"-Moist, dense, dark brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		24"	0	SM	10	0-20"-Wet, loose, dark brown, fine to medium SAND, trace coarse sand. 20-24"-Wet, loose, dark brown, fine to coarse SAND, some medium to fine gravel.	
					11		
					12		
					13		
					14		
MC		48"	0	ML	15	0-3"-Wet, loose, gray, medium to fine SAND, trace coarse sand. 3-36"- Wet, stiff, brown-gray, SILT, some fine sand, little clay. 36-48"- Wet, loose, gary, medium to fine SAND, trace coarse sand.	Samples taken at 16' & 18' Sample IDs: 2-5-16 and 2-5-18
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PARSONS
DRILLING RECORD

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

BORING/ WELL NO. Page 2 of 2
Transect 2 Boring 5
Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		7	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		23	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	GM	20	0-2"- Wet, loose, gray, medium to fine SAND and fine to coarse Gravel. 2-36"- Wet, loose, gray, weathered shale, trace medium to fine sand. Refusal at 22.5ft.	Sample at 20' Sample ID-2-5-20
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD
MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 2 Boring 6**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19	ft bls
Additional Comments:			

Date/Time Start: August 11, 2014
Date/Time Finish: August 11, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		60"	0	SM	0	0-8"-Moist, losoe, brown, topsoil, roots. 8-50"- Dry, dense, medium brown, medium to fine SAND, some silt, trace medium to fine gravel. 50-60"- Moist, dense, dark brown, medium to fine SAND, trace coarse sand.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-30"-Moist, dense, dark brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		30"	0	SM	10	0-25"- Wet, dense, dark brown, medium to fine SAND, some coarse sand. 25--30"- Wet, dense, dark brown, fien to coarse SAND, trace fine gravel.	
					11		
					12		
					13		
					14		
MC		36"	0	SM	15	0-6"- Wet, loose, dark brown, fine to coarse SAND, trace fine gravel. 6-18"- Wet, very stiff, brown, SILT, some clay, tarce fine sand. 18-32"- Wet, loose, gray, medium to fine SAND. 32-36"- Wet, loose, gray, weathered shale, trace medium to fine sand.	Samples taken at 17' & 19 Sample IDs: 2-6-17 and 2-6-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 2 Boring 7**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		10	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19	ft bls
Additional Comments:			

Date/Time Start: August 13, 2014
Date/Time Finish: August 13, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-6"- Moist, loose, dark brown, topsoil, grass, roots. 6-18"-Moist, loose, medium brown, fine to medium SAND, trace coarse gravel. 18-24"- Moist, dense, brown, fein to medium SAND, little silt. 24-30"- Moist, dense, brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		42"	0	SM	5	0-42"- Moist, dense, medium brown, medium to fine SAND.	
					6		
					7		
					8		
					9		
MC		42"	0	SM	10	0-18"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 18-24"- Wet, loose, medium brown, coarse SAND and medium to fine Gravel. 24-42"- Wet, dense, medium brown, fine to coarse SAND, little fine gravel, trace medium to coarse gravel.	
					11		
					12		
					13		
					14		
MC		48"	0	ML-SM	15	0-18"- Wet, stiff, brown, SILT, some clay, some fine sand. 18-28"- Wet, stiff, brown, SILT and fine Sand. 28-44"- Wet, dense, brown, fine SAND and Silt. 44-42"- Wet, loose, gray-brown, fine to coarse SAND and weathered shale. Refusal at 19ft.	Samples taken at 17' & 19' Sample IDs: 2-7-17 and 2-7-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 — **Transect 2.5 Boring 1**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.5	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-8"-Moist, loose, dark brown, topsoil, roots. 8-14"- Moist, stiff, medium brown, SILT and fine Sand. 14-30"-Moist, dense, medium brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"-Wet, dense, medium brown, medium to fine SAND.	Sample taken at 10' Sample ID: 2.5-1-10
					6		
					7		
					8		
					9		
MC		48"	0	SM	10	0-2"- Wet, dense, medium brown, medium to fine SAND. 2-18"- Wet, dense, medium brown, fine to coarse SAND, trace fine to medium gravel. 18-36"- Wet, stiff, brown, SILT, some fine sand, trace clay. 36-42"- Wet, very stiff, gray-brown, SILT and Clay, trace fine sand.	Sample taken at 15' Sample ID: 2.5-1-15
					11		
					12		
					13		
					14		
MC		54"	0	ML	15	0-4"- Wet, stiff, gray-brown, SILT, some clay, little fine sand. 4-50"- Wet, stiff, brown, SILT and fine Sand, some medium to fine gravel. 50-54"- Wet, loose, gray, weathered shale, some fine to coarse sand. Refusal at 19.5ft.	Sample taken at 19' Sample ID: 2.5-1-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 2.5 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Location Plan

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-8"- Moist, loose, dark brown, topsoil, roots. 8-30"- Moist, dense, medium brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, medium brown, medium to fine SAND.	
					6		
					7		
					8		
					9		
MC		36"	0	SM	10	0-24"- Wet, dense, medium brown, medium to fine SAND. 24-36"- wet, dense, medium brown, fine to coarse SAND.	
					11		
					12		
					13		
					14		
MC		54"	0	ML	15	0-18"- Wet, stiff, brown, SILT, some fine sand, little fine gravel. 18-36"- Wet, stiff, brown, SILT, some fine sand, some clay. 36-48"- Wet, soft, brown, Silt and fine Sand. 48-54"- Wet, loose, gray, weathered shale and fine to coare Sand.	Sample taken at 18' and Sample IDs: 2.5-2-18 and 2.5-2-20
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 2.5 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-6"- Moist, loose, dark brownb, topsoil, roots. 6-12"- Moist, soft, medium brown, SILT and fine Sand. 12-16"- Moist, stiff, brown, SILT and fine Sand. 16-30"- Moist, dense, medium brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, medium brown, medium to fine SAND.	
					6		
					7		
					8		
					9		
MC		48"	0	SM	10	0-30"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 30-36"- Wet, loose, medium brown, fine to coarse SAND, trace fine gravel. 36-48"- Wet, dense, medium brown, medium to fine SAND, little coarse sand.	Sample taken at 15' Sample ID: 2.5-3-15
					11		
					12		
					13		
					14		
MC		36"	0	ML	15	0-12"- Wet, stiff, brown, SILT, some fine to medium sand, little fine to medium gravel. 12-24"- Wet, very stiff, gray-brown, SILT and Clay, some fine sand. 24-36"- Wet, stiff, brown, SILT, and fine Sand.	Sample taken at 19' Sample ID: 2.5-3-19
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 — **Transect 2.5 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		18"	0	GM	20	0-18"- Wet, loose, gray, weathered shale, little fine to coarse sand. Refusal at 22ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 2.5 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		7	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-8"- Moist, loose, dark brown, topsoil, roots. 8-18"- Moist, dense, brown, fine SAND and Silt. 18-30"- Moist, dense, medium brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		42"	0	SM	5	0-42"- Moist (wet at 7'), dense, medium brown, medium to fine SAND.	
					6		
					7		
					8		
					9		
MC		48"	0	ML	10	0-6"- Wet, dense, medium brown, fine to coarse SAND. 6-8"- Wet, loose, brown, fine to coarse GRAVEL and fine to coarse Sand, some silt. 8-24"- Wet, stiff, brown, SILT, some fine sand, little clay. 24-48"- Wet, very stiff, gray-brown, SILT and Clay, some fine sand.	Sample taken at 14' Sample ID: 2.5-4-14
					11		
					12		
					13		
					14		
MC		42"	0	ML	15	0-18"- Wet, very stiff, gray-brown, SILT and Clay, some fine sand. 18-30"- Wet, stiff, brown, SILT and fine Sand. 30-42"- Wet, loose, gray, weathered shale and fine to coarse Sand.	Sample taken at 18' Sample ID: 2.5-4-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 2.5 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.5	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Location Plan

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-6"- Moist, loose, dark browm, topsoil, roots. 6-18"- Moist, soft, dark brown, SILT, some fine sand. 18-42"- Moist, dense, brown, medium to fine SAND	
					1		
					2		
					3		
					4		
MC		42"	0	SM	5	0-42"- Wet, dense, medium brown, medium to fine SAND, trace silt.	
					6		
					7		
					8		
					9		
MC		60"	0	SM-ML	10	0-30"- Wet, dense, medium brown, medium to fine SAND, trace silt. 30-48"- Wet, stiff, brown, SILT, some fine sand, little clay. 48-60"- Wet, very stiff, gray-brown, SILT, some clay, trace fine sand.	Sample taken at 15' Sample ID: 2.5-5-15
					11		
					12		
					13		
					14		
MC		60"	0	ML	15	0-18"- Wet, stiff, gray-brown, SILT, some clay, little fine sand, trace fine gravel. 18-42"- Wet, soft, brown, SILT and fine Sand, some fine gravel. 42-60"- Wet, loose, gray, weathered shale, some medium to fine sand. Refusal at 19.5ft.	Sample taken at 18' Sample ID: 2.5-5-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 2.5 Boring 6**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		24"	0	SM	0	0-8"- Moist, loose, brown, topsoil, roots. 8-24"- Moist, dense, brown, medium to fine SAND, trace silt.	
					1		
					2		
					3		
					4		
MC		48"	0	SM	5	0-18"- Wet, dense, medium brown, medium to fine SAND, trace silt. 18-48"- Wet, dense, medium brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		54"	0	ML	10	0-8"- Wet, dense, meedium brown, fine to coarse SAND. 8-10"- Wet, loose, brown, fine to coarse SAND and fine to medium Gravel, some silt. 10-54"- Wet, very stiff, brown, SILT, some clay, little fine sand.	Sample taken at 14' Sample ID: 2.5-6-14
					11		
					12		
					13		
					14		
MC		48"	0	ML-GM	15	0-18"- Wet, stiff, brown, SILT and fine Sand. 18-48"- Wet, loose, gray, weathered shale, some fine to coarse sand.	Sample taken at 18' Sample ID: 2.5-6-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 3 Boring 1**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		18	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-8"- Moist, loose, brown, topsoil, roots. 8-16"- Dry, dense, light brown, medium to fine SAND. 16-19"- Dry, dense, light brown, fine to coarse SAND. 19-22"- Dry, dense, light brown, medium to fine SAND. 22-48"- Dry, dense, light brown, fine to coarse SAND.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-24"- Wet, dense, medium brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		42"	0	ML	10	0-18"- Wet, loose, medium brown, fine to coarse SAND, trace fine gravel. 18-24"- Wet, stiff, brown, SILT, some fine sand. 24-42"- Wet, stiff, brown, SILT, some fine sand, little clay.	Sample at 15' Sample ID-3-1-15
					11		
					12		
					13		
					14		
MC		36"	0	ML-SM	15	0-18"- Wet, stiff, brown, SILT, some fine sand, little clay. 18-32"- Wet, dense, light brown, fine SAND and Silt, trace fine gravel. 32-36"- Wet, loose, gray, weathered shale. Refusal at 18ft.	Sample at 18' Sample ID-3-1-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 — **Transect 3 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-6"- Moist, loose, brown, topsoil, roots. 6-18"- Dry, dense, meidum brown, fine to coarse SAND. 18-24"- Dry, dense, light brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		24"	0	SM	5	0-24"- Wet, dense, medium brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		60"	0	SM	10	0-52"- Wet, dense, medium brown, fine to coarse SAND. 52-60"- Wet, stiff, brown, SILT and fine Sand.	Sample taken at 14' Sample ID: 2-2-14
					11		
					12		
					13		
					14		
MC		48"	0	ML-SM	15	0-24"- Wet, stiff, brown, SILT and fine Sand. 24-40"- Wet, dense, brown, fine SAND, some silt. 40-48"- Wet, loose, gray, fine to coarse SAND and weathered shale.	Sample taken at 17' Sample ID: 2-2-17
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 3 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		24"	0	GM	20	0-24"- Wet, loose, gray, weathered shale. Refusal at 22ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 3 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	SM	0	0-3"-Moist, loose, dark brown, topsoil, roots. 3-36"- Dry, dense, light brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, meidum brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		42"	0	SM	10	0-42"- Wet, dense, medium brown, fine to coarse SAND, trace fine gravel.	
					11		
					12		
					13		
					14		
MC		48"	0	SM-ML	15	0-24"- Wet, stiff, brown, SILT, some fine sand, little clay. 24-36"- Wet, loose, brown, fine SAND, trace fine gravel. 36-48"- Wet, gray, loose, fine to coarse SAND and weathered shale. Refusal at 20ft.	Samples taken at 16' and 19' Sample IDs: 3-3-16 and 3-3-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 3 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-8"- Moist, loose, brown, topsoil, roots. 8-42"- Moist, dense, light brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		42"	0	SM	5	0-42"- Wet, dense, medium brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		60"	0	SM	10	0-52"- Wet, dense, medium brown, fien to coarse SAND. 52-53"- Wet, stiff, brown, SILT and fine Sand, trace fine sand. 53-60"- Wet, stiff, brown, SILT, some fine sand.	
					11		
					12		
					13		
					14		
MC		48"	0	ML	15	0-30"- Wet, stiff, brown, SILT, some fine sand, little clay. 30-42"- Wet, loose, brown, fine SAND, little silt. 42-48"- Wet, loose, gray, fine to coarse SAND and weathered shale. Refusal at 20ft.	Samples taken at 16' and 19' Sample IDs: 3-4-16 and 3-4-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 3 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	SM	0	0-8"- Moist, loose, brown, topsoil roots. 8-36"- Moist, dense, medium brown, fine to medium SAND.	
					1		
					2		
					3		
					4		
MC		48"	0	SM	5	0-48"- Wt, dense, meidum brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		60"	0	SM-ML	10	0-36"- Wet, dense, medium brown, fine to coarse SAND. 36-38"- Wet, loose, brown, fine SAND, some silt, trace coarse sand. 38-60"- Wet, stiff, brown, SILT, some fine sand, little clay, trace fine gravel.	Sample taken at 15' Sample ID: 3-5-15
					11		
					12		
					13		
					14		
MC		60"	0	SM	15	0-18"- Wet, stiff, brown, SILT, some fine sand, trace clay. 18-58"- Wet, loose, brown, fine SAND, some silt. 58-60"- Wet, loose, gray, weathered shale and fine to coarse Sand.	Samples taken at 16 ' and 20' Sample IDs: 3-5-16 and 3-5-20
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 3 Boring 6**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.8	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		36"	0	SM	0	0-8"-Moist, losoe, brown, topsoil, roots. 8-36"- Moist, dense, light brown, medium to fine SAND, some coarse sand between 20-36".	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, meidum brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		48"	0	ML	10	0-6"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 6-30"- Wet, stiff, brown, SILT and fine Sand. 30-48"- Wet, very stiff, brown, SILT, some fine sand, some clay.	Sample taken at 14' Sample ID: 3-6-14
					11		
					12		
					13		
					14		
MC		42"	0	SM	15	0-6"- Wet, stiff, brown, SILT, some fine sand. 6-24"- Wet, loose, brown, medium to fine SAND, some fine to coarse gravel. 24-42"- Wet, loose, gray, fine to coarse SAND and weathered shale.	Sample taken at 18' Sample ID: 3-6-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 3 Boring 7**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		20	ft bls
Additional Comments:			

Date/Time Start: August 13, 2014
Date/Time Finish: August 13, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-4"- Moist, loose, dark brown, topsoil, roots. 4-16"- Moist, dense, medium brown, fine SAND, some medium sand. 16-30"- Moist, dense, medium brown, fine to medium SAND, little coarse sand.	
					1		
					2		
					3		
					4		
MC		48"	0	SM	5	0-24"- Wet, dense, medium brown, fine SAND, some medium sand. 24-48"- Wet, dense, medium brown, fine to medium SAND transitioning to fine to coarse sand.	
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-24"- Wet, dense, medium brown, fine to coarse SAND. 24-27"- Wet, loose, brown, fine to coarse GRAVEL and fine to coarse Sand, trace silt. 27-39"- Wet, stiff, brown, SILT, some fine sand. 39-51"- Wet, stiff, brown, SILT,and Clay, trace fine sand. 51-60"- Wet, stiff, brown, SILT and fine Sand.	Samples taken at 12' and 14' Sample IDs: 3-7-12 and 3-7-14
					11		
					12		
					13		
					14		
MC		36"	0	ML-SM	15	0-18"- Wet, stiff, brown, SILT and fine Sand. 18-20"- Wet, dense, brown, medium to fine SAND. 20-30"- Wet, dense, brown, fine to coarse SAND. 30-36"- Wet, loose, brown, fine to coarse GRAVEL, trace cobbles. Refusal and 20ft.	Sample taken at 19' Sample ID: 3-7-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 4 Boring 1**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		4	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		18	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-4"- Moist, loose, dark brown, topsoil, roots. 4-8"- Moist, dense, medium brown, medium to fine SAND, some coarse sand. 8-18"-Moist, dense, light brown, medium to fine SAND, little silt. 18-30"- Wet, dense, medium brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		48"	0	SM	5	0-20"- Wet, dense, medium brown, medum to fine SAND, some coarse sand. 20-48"- Wet, dense, medium brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		42"	0	SM	10	0-24"- Wet, dense, medium brown, fine to coarse SAND, trace fine to medium gravel. 24-26"- Wet, loose, brown, fine to coarse GRAVEL and fine to coarse Sand, some silt. 26-36"- Wet, stiff, brown, SILT, some fine sand. 36-42"- Wet, dense, medium brown, fine to coarse SAND.	Sample at 14' Sample ID-4-1-14
					11		
					12		
					13		
					14		
MC		24"	0	SM	15	0-20"- Wet, dense, medium brown, fine to coarse SAND, trace weathered shale. 20-24"- Wet, loose, gray, weathered shale and fine to coarse Sand. Refusal at 18ft.	Sample at 18' Sample ID-4-1-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 4 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		18.5	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-4"- Moist, loose, dark brown, topsoil, roots. 4-10"- Moist, dense, light brown, medium to fine SAND. 10-30"- Moist, dense, medium brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, medium brown, medium to fine SAND, some coarse sand, trace fine gravel.	
					6		
					7		
					8		
					9		
MC		48"	0	SM-ML	10	0-24"- Wet, dense, medium brown, medium to fine SAND, some coarse sand, trace fine gravel. 24-48"- Wet, stiff, brown, SILT, some fine sand, little clay, trace medium to fine gravel.	
					11		
					12		
					13		
					14		
MC		24"	0	ML-GM	15	0-12"- Wet, stiff, brown, SILT and fine Sand. 12-24"- Wet, loose, gray, weathered shale and fine to coarse Sand.Refusal at 18.5ft.	Samples taken at 16' and 18.5' Sample IDs: 4-2-16 and 4-2-18.5
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 4 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		18.5	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-2"- Moist, loose, dark brown, topsoil, roots. 2-30"- Moist, dense, medium brown, medium to fine SAND, some coarse sand, trace fine gravel.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, medium brown, medium to fine SAND, some coarse sand, trace silt.	
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-30"- Wet, dense, medium brown, medium to fine SAND, some coarse sand, trace silt. 30-56"- Wet, stiff, brown, SILT, some fine sand, trace clay. 56-60"- Wet, stiff, brown, SILT, some clay and fine sand.	Sample taken at 15' Sample ID: 4-3-15
					11		
					12		
					13		
					14		
MC		24"	0	ML-SM	15	0-12"- Wet, stiff, brown, SILT, some clay, some fine sand, little fine gravel. 12-24"- Wet, loose, gray, fine to coarse SAND and weathered shale.	Sample taken at 17' Sample ID: 4-3-17
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 4 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.75	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-4"- Moist, loose, dark brown, topsoil, roots. 4-30"- Moist, dense, medium brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		54"	0	SM	5	0-54"- Wet, dense, medium brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		60"	0	SM	10	0-42"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 42-48"- Wet, stiff, brown, SILT and fine Sand, little fine gravel. 48-60"- Wet, stiff, brown, SILT, some fine sand, little clay.	Sample taken at 15' Sample ID: 4-4-15
					11		
					12		
					13		
					14		
MC		36"	0	SM	15	0-12"- Wet, stiff, brown, SILT, some fine sand, trace clay, trace fine gravel. 12-18"- Wet, loose, light-medium gray, fine to coarse SAND, some fine to coarse gravel, little weathered shale. 18-36"- Wet, loose, gray, weathered shale, some medium to fine sand.	Sample taken at 18' Sample ID: 4-4-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 4 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		21	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Location Plan

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-4"- Moist, loose, dark brown, topsoil, roots. 4-30"- Moist, dense, medium brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		42"	0	SM	5	0-42"- Wet, dense, medium brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		30"	0	SM	10	0-12"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 12-30"- Wet, stiff, brown, SILT and fine Sand, little clay from 28-30".	
					11		
					12		
					13		
					14		
MC		30"	0	SM	15	0-6"- Wet, stiff, brown, SILT, some fine sand, little clay. 6-28"- Wet, loose, gray, medium to fine SAND. 28-30"- Wet, loose, gray, weathered shale.	Sample taken at 16' and 20' Sample ID: 4-5-16 and 4-5-20
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 4 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		21	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		4"	0	GM	20	0-4"- Wet, loose, gray, weathered shale. Refusal at 21ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 4 Boring 6**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.5	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-8"-Moist, loose, brown, topsoil, roots. 8-30"- Moist, dense, light brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		36"	0	SM	5	0-36"- Wet, dense, meidum brown, fine to coarse SAND.	
					6		
					7		
					8		
					9		
MC		42"	0	ML	10	0-12"-Wet, dense, brown, fine SAND and Silt. 12-18"- Wrt, stiff, brown, SILT, some fine sand. 18-42"- Wet, stiff, brown, SILT, some clay, some fine sand.	Sample taken at 14' Sample ID: 4-6-14
					11		
					12		
					13		
					14		
MC		42"	0	GM	15	0-42"- Wet, dense, gray, weathered shale and fine to coarse Sand.	Sample taken at 19' Sample ID: 4-6-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PARSONS
DRILLING RECORD

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

BORING/ WELL NO. Page 1 of 2
Transect 5 Boring 0
Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		4	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-10"- Moist, loose, dark brown, topsoil, roots. 10-18"- Moist, stiff, dark brown, SILT, some fine to medium sand, trace fine gravel. 18-42"- Moist-wet, sense, medium brown, medium to fine SAND.	Sample at 5' Sample ID-5-0-5
					1		
					2		
					3		
					4		
MC		54"	0	SM	5	0-30"- Wet, dense, brown, medium to fine SAND. 30-54"- Wet, dense, medium brown, medium to fine SAND, some coarse sand.	Sample at 10' Sample ID-5-0-10
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-12"- Wet, stiff, brown, SILT, some fine sand. 12-36"- Wet, stiff, brown, SILT, some fine sand, little clay. 36-60"- Wet, stiff, bornw, SILT and fine Sand.	Sample at 13' Sample ID-5-0-13
					11		
					12		
					13		
					14		
MC		42"	0	ML	15	0-10"- Wet, stiff, brown, SILT and fine Sand. 10-20"- Wet, very stiff, gray-brown, SILT and Clay, little fine sand. 20-40"- Wet, stiff, brown, SILT, some fine sand. 40-42"- Wet, dense, brown, medium to fine SAND.	Sample at 20' Sample ID-5-0-20
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD
MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 5 Boring 0**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		4	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 14, 2014
Date/Time Finish: August 14, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		18"	0	SM	20	0-6"- Wet, stiff, brown, SILT and fine sand, some weathered shale. 6-18"- Wet, loose, gray, weathered shale and fine to coarse Sand. Refusal at 22ft.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 5 Boring 1**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19.5	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		30"	0	SM	0	0-12"- Moist, loose, dark brown, topsoil, roots. 12-24"- Moist, dense, light brown, medium to fine SAND, little silt. 24-30"- Moist, dense, light brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		48"	0	SM	5	0-48"- Wet, dense, medium brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-2"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 2-26"- Wet, stiff, brown, SILT and fine Sand, little clay. 26-50"- Wet, stiff, brown-gray, CLAY, some silt, little fine sand. 50-60"- Wet, stiff, brown, SILT, some fine sand.	Sample taken at 14' Sample ID: 5-1-14
					11		
					12		
					13		
					14		
MC		48"	0	ML-SM	15	0-8"- Wet, stiff, brown, SILT and fine to coarse Sand, some fine to coarse gravel. 8-20"- Wet, dense, brown, fine SAND and Silt. 20-46"- Wet, very stiff, brown, SILT and Clay, some fine sand, trace fine gravel. 46-48"- Wet, very stiff, gray-brown, CLAY and Silt, little weathered shale. Refusal at 19.5ft.	Sample taken at 19' Sample ID: 5-1-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 5 Boring 2**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		24"	0	SM	0	0-6"- Moist, loose, dark brown, topsoil, roots. 6-24"- Moist, dense, medium brown, medium to fine SAND, some coarse sand.	
					1		
					2		
					3		
					4		
MC		60"	0	SM	5	0-52"- Wet, dense, medium brown, medium to fine SAND, some coarse sand. 52-60"- Wet, very stiff, brown, SILT and Clay, trace fine sand and fine gravel.	
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-14"- Wet, stiff, brown, SILT and fine Sand. 14-26"- Wet, dense, brown, fine SAND and Silt. 26-40"- Wet, stiff, brown, SILT and fine Sand, trace clay. 40-50"- Wet, very stiff, gray-brown, CLAY and Silt, trace fine sand. 50-60"- Wet, dense, brown, medium to fine SAND.	Sample taken at 14' Sample ID: 5-2-14
					11		
					12		
					13		
					14		
MC		48"	0	ML-SM	15	0-3"- Wet, stiff, brown, SILT and fine Sand, some fine to coarse gravel. 3-24"- Wet, dense, brown, medium to fine SAND, trace silt. 24-48"- Wet, stiff, brown, SILT, some medium to fine sand, little fine gravel, trace weathered shale. Refusal at 19ft.	Sample taken at 17' Sample ID: 5-2-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD
MC=Macrocore

COMMENTS:
Groundwater samples taken at 10-13', 13-5-16.5', and 17-19-5'

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 **Transect 5 Boring 3**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19	ft bls
Additional Comments:			

Date/Time Start: August 12, 2014
Date/Time Finish: August 12, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		48"	0	SM	0	0-3"- Moist, loose, brown, topsoil, roots. 3-48"- Moist, dense, medium brown, medium to fine SAND, trace coarse sand.	
					1		
					2		
					3		
					4		
MC		60"	0	SM	5	0-60"- Wet, dense, medium brown, medium to fine SAND, some coarse sand.	
					6		
					7		
					8		
					9		
MC		54"	0	ML	10	0-3"- Wet, loose, brown, fine to coarse SAND transitioning to fine to coarse Gravel. 3-6"- Wet, stiff, brown, SILT anf fine to coarse Sand, little fine gravel. 6-24"- Wet, stiff, brown, SILT and fine Sand. 24-36"- Wet, stiff, brown, SILT, some fine sand, trace clay. 36-52"-Wet, very stiff, brown-gray, CLAY and Silt, trace fine sand. 52-54"- Wet, dense, brown, fine SAND and Silt.	Sample taken at 14' Sample ID: 5-3-14
					11		
					12		
					13		
					14		
MC		24"	0	SM-ML	15	0-12"- Wet, dense, brown, fine SAND, some silt. 12-24"- Wet, stiff, brown, SILT, some clay, some fine to coarse gravel. Refusal at 19ft.	Samples taken at 18' and 19' Sample ID: 5-3-18 and 5-3-19
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 2 **Transect 5 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		3	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 13, 2014
Date/Time Finish: August 13, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		54"	0	SM	0	0-4"- Moist, loose, dark brown, topsoil, roots. 4-16"- Moist, dense, brown, medium to fine SAND, trace silt. 16-18"- Moist, dense, brown-gray, medium to fine SAND, trace silt, 18-54"- Wet, dense, brown, medium to fine SAND, trace silt.	
					1		
					2		
					3		
					4		
MC		30"	0	SM	5	0-30"- Wet, dense, medium-dark brown, medium to fine SAND, trace coarse sand.	
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-18"- Wet, dense, medium brown, fine to coarse SAND transitioning to silt and fine to coarse gravel. 18-48"- Wet, very stiff, brown, SILT, some clay, trace fine sand. 48-60"- Wet, stiff, brown, SILT, some fine sand, trace clay.	Sample taken at 14'. Sample ID: 5-4-14
					11		
					12		
					13		
					14		
MC		60"	0	ML	15	0-18"- Wet, stiff, brown, SILT and fine Sand. 18-60"- Wet, styiff, brown, SILT, some fine sand, trace fine to coarse gravel.	Samples taken at 18' and 20' Sample IDs: 5-4 and 5-4-20
					16		
					17		
					18		
					19		
					20		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 2 of 2 **Transect 5 Boring 4**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		3	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		22	ft bls
Additional Comments:			

Date/Time Start: August 13, 2014
Date/Time Finish: August 13, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		18"	0	GM	20	0-18"- Wet, loose, gray, weathered shale.	
					21		
					22		
					23		
					24		
					25	End of Boring	
					26		
					26		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
					36		
					37		
					38		
					39		
					40		

SAMPLING METHOD

MC=Macrocore

COMMENTS:

PARSONS

DRILLING RECORD

BORING/ WELL NO. Page 1 of 1 — **Transect 5 Boring 5**

Contractor: Stone Environmental
Driller: Chris Aldrich
Oversight: Allison Jordan
Rig Type: Geoprobe

PROJECT NAME: Griffiss B817
PROJECT Location: Rome, NY

Location Description: South of B817

Location Plan

GROUNDWATER OBSERVATIONS			
Apparent Borehole DTW:		5	ft bls
Measured Water Level:		NA	ft bls
Total Depth of Boring:		19	ft bls
Additional Comments:			

Date/Time Start: August 13, 2014
Date/Time Finish: August 13, 2014

Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
MC		42"	0	SM	0	0-8"- Moist, loose, dark brown, topsoil, roots. 8-26"- Moist, dense, medium brown, medium to fine SAND.	
					1		
					2		
					3		
					4		
MC		54"	0	SM	5	0-50"- Wet, dense, medium brown, medium to fine SAND, trace silt. 50-54"- Wet, stiff, brown, SILT and fine Sand.	Sample taken at 9' Sample ID: 5-5-9
					6		
					7		
					8		
					9		
MC		60"	0	ML	10	0-4"- Wet, stiff, brown, SILT and fine Sand. 4-36"- Wet, very stiff, brown, SILT, some clay, little fine sand. 36-60"- Wet, stiff, brown, SILT and fine Sand, trace clay	Sample taken at 13' Sample ID: 5-5-13
					11		
					12		
					13		
					14		
MC		48"	0	ML-GM	15	0-24"- Wet, stiff, brown, SILT, and fine Sand, little fine to coarse gravel. 24-36"- Wet, dense, brown, medium to fine SAND, some weathered shale. 36-48"- Wet, loose, gray, weathered shale.	Sample taken at 18' Sample ID: 5-5-18
					16		
					17		
					18		
					19		
					20	End of Boring	

SAMPLING METHOD

MC=Macrocore

COMMENTS:

APPENDIX B

LABORATORY DATA

Final Data Report for Laboratory Services

PREPARED FOR: PARSONS ENGINEERING SCIENCE, INC.

SITE ID: GRIFFIS AFB, ROME, NY

Stone Project ID: 14-152

MobiLab™
DEFENSIBLE REAL-TIME ANALYTICS

DATES OF PERFORMANCE: August 11-15, 2014 (SDG-1)
REPORT DATE: August 27, 2014

Prepared for:
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Table of Contents Page

MobiLab™

DEFENSIBLE REAL-TIME ANALYTICS

STONE ENVIRONMENTAL, INC. LABORATORY

NARRATIVE

August 27, 2014

This data package presents the analytical results for soil and water samples analyzed by Stone Environmental, Inc. Laboratory (Stone Mobilab Unit #2) at Griffis AFB in Rome, NY on August 11-15, 2014. A total of 106 soil samples and 22 water samples from 8 boring locations are reported in this sample delivery group (SDG-1). Two sets of matrix spike and matrix spike duplicate analyses were analyzed for the soil matrix (samples 4-6-19 and 2.5-4-18) and one set for the water samples (2.5-5 (10-13).

The soil samples in this SDG were collected and preserved in 10 mLs methanol by Parsons' personnel between August 11-15, 2014 at the Griffis AFB in Rome, NY and water samples were collected in unpreserved 40 mL VOA vials. Samples were hand delivered to the onsite laboratory immediately after collection; therefore, receipt temperatures were not measured. Soil samples were stored in a freezer in the laboratory before and after analysis. Water samples were stored in the refrigerator (<6°C) before and after analysis.

Stone's Sample Login Sheet and a summary of samples logged into Stone's Laboratory Information Management System (LIMS) are included in the Sample Login Summary Section of this report. A summary of soil sample weights is also included in this section. All soil sample results are reported in units of µg/kg on a wet weight (i.e., as received) basis. Groundwater sample results are reported in units of µg/L.

Samples were analyzed by EPA SW846 Method 8260C (gas chromatography / mass spectrometry (GC/MS)) set in selective ion monitoring (SIM) mode for 5 target volatile organic compounds (VOCs) in accordance with Stone's Standard Operating Procedure (SOP) SEI-10.15.11, "The Determination of Volatile Organic Compounds By GC/MS (SW846 USEPA Method 8260C)". Stone's Method 8260C (GC/MS) is provided under the National Environmental Laboratory Accreditation Program (NELAP) fields of testing, for which Stone holds NELAP accreditation for soil and waters in the State of NY. The analytical results associated with the samples presented in this report were generated under a quality system that adheres to requirements specified in the NELAP standards. All QA/QC results associated

with these data were found to be within the tolerances set forth in SOP SEI-10.15.11 and NELAP standards with the exceptions noted below:

- In the analytical sequence on 8/14/2014, samples 2.5-4-18MS/MSD, 2.5-5-15, 2.5-18, 2.5-4-14 exhibited a signal response depression around the elution of vinyl chloride. After this, the filament required replacement and the sequence was ended. Samples were not reanalyzed per the request of the client since all other results were acceptable and the presence of vinyl chloride was not likely. In addition, the MS/MSD sample recovery of vinyl chloride was acceptable suggesting that, although there was a depression of the signal, detection of vinyl chloride was acceptable. Sample results for vinyl chloride were qualified with a "Q" to indicate the signal depression in the affected samples noted above.
- Initial calibration (ICAL) Deficiencies:
    - No deficiencies.
- Continuing Calibration Verification (VSTD) Sample Deficiencies:
    - For samples analyzed on 8/13/2014, recovery of vinyl chloride was slightly above the limit at 28%D rather than 20%. Vinyl chloride was not detected in any samples in the sequence; therefore, no data were qualified.
- Laboratory Control Sample (LCS) Deficiencies:
    - No deficiencies.
- Volatile Method Blank (VBLK) Deficiencies:
    - No deficiencies.
- MS/MSD Sample Deficiencies:
    - Results were acceptable and met 70-130% recovery.
- BFB Tune Deficiencies:
    - No deficiencies.
- Internal Standard (IS) and Surrogate Standard (SS) Deficiencies:
    - No deficiencies

When applicable, the final results were annotated with the following codes:

U - The analyte was analyzed for, but was not detected above the reported quantitation limit.

J - The analyte was positively identified; the associated numerical value is between the MDL and RL and is, therefore, an estimated concentration of the analyte in the sample.

Q - The value is estimated due to one or more quality control failures for that compound.

B - Indicates the analyte was found in the associated laboratory blank as well as the sample.

E - Estimated value, marginally above the calibration levels.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature: 

Kim Watson, Quality Assurance Manager, Stone Environmental, Inc.

SAMPLE LOGIN SUMMARY

Lab ID	Pct Moisture	Location ID	Depth	Matrix	Sample Name	Sample Code	Quantity	Collected By	Collected Date	Collected Time	Collection Method	Received By	Received Date	Received Time	Received Temp	Preservative	Lab ID_Parent	Comments
SEI-1	0	1-1	010.00	Soil	1-1-10	Normal Sample	1	AJ	8/11/2014	9:00 AM	Grab	MJM	8/11/2014	9:35 AM	N/A	MeOH		
SEI-2	0	1-1	017.00	Soil	1-1-17	Normal Sample	1	AJ	8/11/2014	9:18 AM	Grab	MJM	8/11/2014	9:35 AM	N/A	MeOH		
SEI-3	0	1-2	017.00	Soil	1-2-17	Normal Sample	1	AJ	8/11/2014	10:10 AM	Grab	MJM	8/11/2014	10:43 AM	N/A	MeOH		
SEI-4	0	1-3	016.00	Soil	1-3-16	Normal Sample	1	AJ	8/11/2014	10:30 AM	Grab	MJM	8/11/2014	10:43 AM	N/A	MeOH		
SEI-5	0	1-4	015.00	Soil	1-4-15	Normal Sample	1	AJ	8/11/2014	10:55 AM	Grab	MJM	8/11/2014	11:31 AM	N/A	MeOH		
SEI-6	0	1-4	016.00	Soil	1-4-16	Normal Sample	1	AJ	8/11/2014	10:55 AM	Grab	MJM	8/11/2014	11:31 AM	N/A	MeOH		
SEI-7	0	1-5	015.00	Soil	1-5-15	Normal Sample	1	AJ	8/11/2014	11:45 AM	Grab	MJM	8/11/2014	12:45 PM	N/A	MeOH		
SEI-8	0	1-5	016.00	Soil	1-5-16	Normal Sample	1	AJ	8/11/2014	11:45 AM	Grab	MJM	8/11/2014	12:45 PM	N/A	MeOH		
SEI-9	0	1-6	010.00	Soil	1-6-10	Normal Sample	1	AJ	8/11/2014	1:10 PM	Grab	MJM	8/11/2014	1:35 PM	N/A	MeOH		
SEI-10	0	1-6	016.00	Soil	1-6-16	Normal Sample	1	AJ	8/11/2014	1:20 PM	Grab	MJM	8/11/2014	1:35 PM	N/A	MeOH		
SEI-11	0	2-5	020.00	Soil	2-5-20	Normal Sample	1	AJ	8/11/2014	3:10 PM	Grab	MJM	8/11/2014	3:12 PM	N/A	MeOH		
SEI-12	0	2-5	018.00	Soil	2-5-18	Normal Sample	1	AJ	8/11/2014	2:40 PM	Grab	MJM	8/11/2014	3:12 PM	N/A	MeOH		
SEI-13	0	2-6	017.00	Soil	2-6-17	Normal Sample	1	AJ	8/11/2014	2:10 PM	Grab	MJM	8/11/2014	3:12 PM	N/A	MeOH		
SEI-14	0	2-5	016.00	Soil	2-5-16	Normal Sample	1	AJ	8/11/2014	2:40 PM	Grab	MJM	8/11/2014	3:12 PM	N/A	MeOH		
SEI-15	0	2-4	018.00	Soil	2-4-18	Normal Sample	2	AJ	8/11/2014	3:37 PM	Grab	MJM	8/11/2014	3:45 PM	N/A	MeOH		
SEI-16	0	2-4	017.00	Soil	2-4-17	Normal Sample	2	AJ	8/11/2014	3:36 PM	Grab	MJM	8/11/2014	3:45 PM	N/A	MeOH		
SEI-17	0	2-4	016.00	Soil	2-4-16	Normal Sample	1	AJ	8/11/2014	3:35 PM	Grab	MJM	8/11/2014	3:45 PM	N/A	MeOH		
SEI-18	0	2-3	018.00	Soil	2-3-18	Normal Sample	1	AJ	8/11/2014	4:20 PM	Grab	MJM	8/11/2014	4:29 PM	N/A	MeOH		
SEI-19	0	2-3	017.00	Soil	2-3-17	Normal Sample	1	AJ	8/11/2014	4:20 PM	Grab	MJM	8/11/2014	4:29 PM	N/A	MeOH		
SEI-20	0	2-3	016.00	Soil	2-3-16	Normal Sample	1	AJ	8/11/2014	4:20 PM	Grab	MJM	8/11/2014	4:30 PM	N/A	MeOH		
SEI-21	0	2-2	017.00	Soil	2-2-17	Normal Sample	1	AJ	8/11/2014	5:05 PM	Grab	MJM	8/11/2014	5:20 PM	N/A	MeOH		
SEI-22	0	2-2	014.00	Soil	2-2-14	Normal Sample	1	AJ	8/11/2014	5:05 PM	Grab	MJM	8/11/2014	5:20 PM	N/A	MeOH		
SEI-23	0	2-1	020.00	Soil	2-1-20	Normal Sample	1	AJ	8/12/2014	8:30 AM	Grab	MJM	8/12/2014	9:00 AM	N/A	MeOH		
SEI-24	0	2-1	017.00	Soil	2-1-17	Normal Sample	1	AJ	8/12/2014	8:25 AM	Grab	MJM	8/12/2014	9:00 AM	N/A	MeOH		
SEI-25	0	2-1	014.00	Soil	2-1-14	Normal Sample	1	AJ	8/12/2014	8:20 AM	Grab	MJM	8/12/2014	9:00 AM	N/A	MeOH		
SEI-26	0	3-1	015.00	Soil	3-1-15	Normal Sample	1	AJ	8/12/2014	8:50 AM	Grab	MJM	8/12/2014	10:00 AM	N/A	MeOH		
SEI-27	0	3-1	018.00	Soil	3-1-18	Normal Sample	1	AJ	8/12/2014	9:10 AM	Grab	MJM	8/12/2014	10:00 AM	N/A	MeOH		
SEI-28	0	3-2	016.00	Soil	3-2-16	Normal Sample	1	AJ	8/12/2014	9:35 AM	Grab	MJM	8/12/2014	10:00 AM	N/A	MeOH		
SEI-29	0	3-2	019.00	Soil	3-2-19	Normal Sample	1	AJ	8/12/2014	9:36 AM	Grab	MJM	8/12/2014	10:00 AM	N/A	MeOH		
SEI-30	0	3-3	016.00	Soil	3-3-16	Normal Sample	1	AJ	8/12/2014	10:15 AM	Grab	MJM	8/12/2014	10:25 AM	N/A	MeOH		
SEI-31	0	3-3	019.00	Soil	3-3-19	Normal Sample	1	AJ	8/12/2014	10:15 AM	Grab	MJM	8/12/2014	10:25 AM	N/A	MeOH		
SEI-32	0	3-4	016.00	Soil	3-4-16	Normal Sample	1	AJ	8/12/2014	11:00 AM	Grab	MJM	8/12/2014	11:06 AM	N/A	MeOH		
SEI-33	0	3-4	019.00	Soil	3-4-19	Normal Sample	1	AJ	8/12/2014	11:00 AM	Grab	MJM	8/12/2014	11:06 AM	N/A	MeOH		
SEI-34	0	3-6	014.00	Soil	3-6-14	Normal Sample	2	AJ	8/12/2014	11:40 AM	Grab	MJM	8/12/2014	12:00 PM	N/A	MeOH		
SEI-35	0	3-6	018.00	Soil	3-6-18	Normal Sample	1	AJ	8/12/2014	11:50 AM	Grab	MJM	8/12/2014	12:00 PM	N/A	MeOH		
SEI-36	0	3-5	015.00	Soil	3-5-15	Normal Sample	1	AJ	8/12/2014	11:17 AM	Grab	MJM	8/12/2014	12:00 PM	N/A	MeOH		
SEI-37	0	3-5	016.00	Soil	3-5-16	Normal Sample	1	AJ	8/12/2014	11:20 AM	Grab	MJM	8/12/2014	12:00 PM	N/A	MeOH		
SEI-38	0	3-5	020.00	Soil	3-5-20	Normal Sample	1	AJ	8/12/2014	11:23 AM	Grab	MJM	8/12/2014	12:00 PM	N/A	MeOH		
SEI-39	0	4-6	014.00	Soil	4-6-14	Normal Sample	1	AJ	8/12/2014	1:00 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH		
SEI-40	0	4-6	019.00	Soil	4-6-19	Normal Sample	1	AJ	8/12/2014	1:02 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH		
SEI-40-MS	0	4-6	019.00	Soil	4-6-19-MS	Matrix Spike	1	AJ	8/12/2014	1:02 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH	4-6-19	
SEI-40-MSD	0	4-6	019.00	Soil	4-6-19-MSD	Matrix Spike Duplicate	1	AJ	8/12/2014	1:02 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH	4-6-19	
SEI-43	0	4-5	016.00	Soil	4-5-16	Normal Sample	1	AJ	8/12/2014	1:20 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH		
SEI-44	0	4-5	020.00	Soil	4-5-20	Normal Sample	1	AJ	8/12/2014	1:23 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH		
SEI-45	0	4-4	015.00	Soil	4-4-15	Normal Sample	1	AJ	8/12/2014	2:00 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH		
SEI-46	0	4-4	018.00	Soil	4-4-18	Normal Sample	1	AJ	8/12/2014	2:10 PM	Grab	MJM	8/12/2014	2:20 PM	N/A	MeOH		
SEI-47	0	4-3	015.00	Soil	4-3-15	Normal Sample	1	AJ	8/12/2014	2:10 PM	Grab	MJM	8/12/2014	3:30 PM	N/A	MeOH		
SEI-48	0	4-3	018.00	Soil	4-3-18	Normal Sample	1	AJ	8/12/2014	2:50 PM	Grab	MJM	8/12/2014	3:30 PM	N/A	MeOH		
SEI-49	0	4-2	016.00	Soil	4-2-16	Normal Sample	1	AJ	8/12/2014	3:15 PM	Grab	MJM	8/12/2014	3:30 PM	N/A	MeOH		
SEI-50	0	4-2	018.00	Soil	4-2-18	Normal Sample	1	AJ	8/12/2014	3:15 PM	Grab	MJM	8/12/2014	3:30 PM	N/A	MeOH		
SEI-51	0	4-1	014.00	Soil	4-1-14	Normal Sample	1	AJ	8/12/2014	3:30 PM	Grab	MJM	8/12/2014	3:30 PM	N/A	MeOH		
SEI-52	0	4-1	018.00	Soil	4-1-18	Normal Sample	1	AJ	8/12/2014	3:35 PM	Grab	MJM	8/12/2014	4:00 PM	N/A	MeOH		
SEI-53	0	5-1	014.00	Soil	5-1-14	Normal Sample	1	AJ	8/12/2014	4:20 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-54	0	5-1	019.00	Soil	5-1-19	Normal Sample	1	AJ	8/12/2014	4:30 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-55	0	5-2	014.00	Soil	5-2-14	Normal Sample	1	AJ	8/12/2014	4:45 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-56	0	5-2	019.00	Soil	5-2-19	Normal Sample	1	AJ	8/12/2014	4:55 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-57	0	5-3	014.00	Soil	5-3-14	Normal Sample	1	AJ	8/12/2014	5:10 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-58	0	5-3	018.00	Soil	5-3-18	Normal Sample	1	AJ	8/12/2014	5:30 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-59	0	5-3	019.00	Soil	5-3-19	Normal Sample	1	AJ	8/12/2014	5:35 PM	Grab	MJM	8/12/2014	5:45 PM	N/A	MeOH		
SEI-60	0	2-7	017.00	Soil	2-7-17	Normal Sample	1	AJ	8/13/2014	9:20 AM	Grab	MJM	8/13/2014	10:43 AM	N/A	MeOH		

Lab ID	Pct Moisture	Location ID	Depth	Matrix	Sample Name	Sample Code	Quantity	Collected By	Collected Date	Collected Time	Collection Method	Received By	Received Date	Received Time	Received Temp	Preservative	Lab ID_Parent	Comments
SEI-61	0	2-7	019.00	Soil	2-7-19	Normal Sample	1	AJ	8/13/2014	9:25 AM	Grab	MJM	8/13/2014	10:43 AM	N/A	MeOH		
SEI-62	0	3-7	011.00	Soil	3-7-11	Normal Sample	1	AJ	8/13/2014	9:55 AM	Grab	MJM	8/13/2014	10:43 AM	N/A	MeOH		
SEI-63	0	3-7	014.00	Soil	3-7-14	Normal Sample	1	AJ	8/13/2014	9:57 AM	Grab	MJM	8/13/2014	10:43 AM	N/A	MeOH		
SEI-64	0	3-7	019.00	Soil	3-7-19	Normal Sample	1	AJ	8/13/2014	10:20 AM	Grab	MJM	8/13/2014	10:43 AM	N/A	MeOH		
SEI-65	0	1-7	015.00	Soil	1-7-15	Normal Sample	1	AJ	8/13/2014	10:47 AM	Grab	MJM	8/13/2014	12:00 PM	N/A	MeOH		
SEI-66	0	1-7	017.00	Soil	1-7-17	Normal Sample	1	AJ	8/13/2014	10:53 AM	Grab	MJM	8/13/2014	12:00 PM	N/A	MeOH		
SEI-67	0	1-2	016.00	Soil	1-2-16	Normal Sample	1	AJ	8/13/2014	11:05 AM	Grab	MJM	8/13/2014	12:00 PM	N/A	MeOH		
SEI-68	0	1-2	017.01	Soil	1-2-17D	Normal Sample	1	AJ	8/13/2014	11:06 AM	Grab	MJM	8/13/2014	12:00 PM	N/A	MeOH		
SEI-69	0	1-2	019.00	Soil	1-2-19	Normal Sample	1	AJ	8/13/2014	11:07 AM	Grab	MJM	8/13/2014	12:00 PM	N/A	MeOH		
SEI-70	0	1-2	010.00	GW	1-2(10-13)	Normal Sample	2	AJ	8/13/2014	1:11 PM	Grab	MJM	8/13/2014	1:30 PM	N/A			
SEI-71	0	1-2	013.50	GW	1-2(13.5-16.5)	Normal Sample	2	AJ	8/13/2014	1:07 PM	Grab	MJM	8/13/2014	1:30 PM	N/A			
SEI-72	0	1-2	016.50	GW	1-2(16.5-18)	Normal Sample	2	AJ	8/13/2014	1:55 PM	Grab	MJM	8/13/2014	2:15 PM	N/A			
SEI-73	0	1-5	010.00	GW	1-5(10-13)	Normal Sample	2	AJ	8/13/2014	2:05 PM	Grab	MJM	8/13/2014	2:15 PM	N/A			
SEI-74	0	1-5	013.50	GW	1-5(13.5-16.5)	Normal Sample	2	AJ	8/13/2014	2:42 PM	Grab	MJM	8/13/2014	3:30 PM	N/A			
SEI-75	0	1-5	017.00	GW	1-5(17-20)	Normal Sample	2	AJ	8/13/2014	3:13 PM	Grab	MJM	8/13/2014	3:30 PM	N/A			
SEI-76	0	5-4	014.00	Soil	5-4-14	Normal Sample	1	AJ	8/13/2014	3:47 PM	Grab	MJM	8/13/2014	4:30 PM	N/A	MeOH		
SEI-77	0	5-4	018.00	Soil	5-4-18	Normal Sample	1	AJ	8/13/2014	3:51 PM	Grab	MJM	8/13/2014	4:30 PM	N/A	MeOH		
SEI-78	0	5-4	020.00	Soil	5-4-20	Normal Sample	1	AJ	8/13/2014	4:00 PM	Grab	MJM	8/13/2014	4:30 PM	N/A	MeOH		
SEI-79	0	5-5	009.00	Soil	5-5-09	Normal Sample	1	AJ	8/13/2014	4:10 PM	Grab	MJM	8/13/2014	4:30 PM	N/A	MeOH		
SEI-80	0	5-5	013.00	Soil	5-5-13	Normal Sample	1	AJ	8/13/2014	4:20 PM	Grab	MJM	8/13/2014	4:30 PM	N/A	MeOH		
SEI-81	0	5-5	018.00	Soil	5-5-18	Normal Sample	1	AJ	8/13/2014	4:25 PM	Grab	MJM	8/13/2014	4:30 PM	N/A	MeOH		
SEI-82	0	1-8	014.00	Soil	1-8-14	Normal Sample	1	AJ	8/14/2014	8:30 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-83	0	1-8	016.00	Soil	1-8-16	Normal Sample	1	AJ	8/14/2014	8:45 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-84	0	2.5-6	014.00	Soil	2.5-6-14	Normal Sample	1	AJ	8/14/2014	9:10 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-85	0	2.5-6	018.00	Soil	2.5-6-18	Normal Sample	1	AJ	8/14/2014	9:20 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-86	0	2.5-5	015.00	Soil	2.5-5-15	Normal Sample	1	AJ	8/14/2014	9:55 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-87	0	2.5-5	018.00	Soil	2.5-5-18	Normal Sample	2	AJ	8/14/2014	10:05 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-88	0	2.5-4	014.00	Soil	2.5-4-14	Normal Sample	1	AJ	8/14/2014	10:30 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-89	0	2.5-4	018.00	Soil	2.5-4-18	Normal Sample	1	AJ	8/14/2014	10:38 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH		
SEI-89-MS	0	2.5-4	018.00	Soil	2.5-4-18-MS	Matrix Spike	1	AJ	8/14/2014	10:38 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH	2.5-4-18	
SEI-89-MSD	0	2.5-4	018.00	Soil	2.5-4-18-MSD	Matrix Spike Duplicate	1	AJ	8/14/2014	10:38 AM	Grab	MJM	8/14/2014	10:45 AM	N/A	MeOH	2.5-4-18	
SEI-92	0	2.5-3	015.00	Soil	2.5-3-15	Normal Sample	1	AJ	8/14/2014	11:13 AM	Grab	MJM	8/14/2014	12:30 PM	N/A	MeOH		
SEI-93	0	2.5-3	019.00	Soil	2.5-3-19	Normal Sample	1	AJ	8/14/2014	11:30 AM	Grab	MJM	8/14/2014	12:30 PM	N/A	MeOH		
SEI-94	0	2.5-2	018.00	Soil	2.5-2-18	Normal Sample	1	AJ	8/14/2014	12:05 PM	Grab	MJM	8/14/2014	12:30 PM	N/A	MeOH		
SEI-95	0	2.5-2	020.00	Soil	2.5-2-20	Normal Sample	1	AJ	8/14/2014	12:10 PM	Grab	MJM	8/14/2014	12:30 PM	N/A	MeOH		
SEI-96	0	2.5-1	005.00	Soil	2.5-1-05	Normal Sample	1	AJ	8/14/2014	12:40 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-97	0	2.5-1	010.00	Soil	2.5-1-10	Normal Sample	1	AJ	8/14/2014	12:50 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-98	0	2.5-1	015.00	Soil	2.5-1-15	Normal Sample	1	AJ	8/14/2014	1:00 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-99	0	2.5-1	019.00	Soil	2.5-1-19	Normal Sample	1	AJ	8/14/2014	1:15 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-100	0	5-0	005.00	Soil	5-0-05	Normal Sample	1	AJ	8/14/2014	1:28 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-101	0	5-0	010.00	Soil	5-0-10	Normal Sample	1	AJ	8/14/2014	1:34 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-102	0	5-0	013.00	Soil	5-0-13	Normal Sample	1	AJ	8/14/2014	1:40 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-103	0	5-0	020.00	Soil	5-0-20	Normal Sample	1	AJ	8/14/2014	1:56 PM	Grab	MJM	8/14/2014	2:00 PM	N/A	MeOH		
SEI-104	0	1-7	010.00	GW	1-7 (10-13)	Normal Sample	2	AJ	8/14/2014	3:45 PM	Grab	MJM	8/14/2014	5:00 PM	N/A			
SEI-105	0	1-7	013.50	GW	1-7 (13.5-16.5)	Normal Sample	2	AJ	8/14/2014	3:50 PM	Grab	MJM	8/14/2014	5:00 PM	N/A			
SEI-106	0	5-3	010.00	GW	5-3 (10-13)	Normal Sample	2	AJ	8/14/2014	2:28 PM	Grab	MJM	8/14/2014	5:00 PM	N/A			
SEI-107	0	5-3	013.50	GW	5-3 (13.5-16.5)	Normal Sample	2	AJ	8/14/2014	2:31 PM	Grab	MJM	8/14/2014	5:00 PM	N/A			
SEI-108	0	5-3	017.00	GW	5-3 (17-19)	Normal Sample	2	AJ	8/14/2014	3:10 PM	Grab	MJM	8/14/2014	5:00 PM	N/A			
SEI-109	0	MH	000.01	GW	MH-2	Normal Sample	2	IB	8/14/2014	5:15 PM	Grab	MJM	8/14/2014	5:30 PM	N/A			
SEI-110	0	1-9	010.00	Soil	1-9-10	Normal Sample	1	AJ	8/14/2014	4:37 PM	Grab	MJM	8/14/2014	5:30 PM	N/A	MeOH		
SEI-111	0	1-9	012.00	Soil	1-9-12	Normal Sample	1	AJ	8/14/2014	4:40 PM	Grab	MJM	8/14/2014	5:30 PM	N/A	MeOH		
SEI-112	0	1-9	014.00	Soil	1-9-14	Normal Sample	1	AJ	8/14/2014	4:42 PM	Grab	MJM	8/14/2014	5:30 PM	N/A	MeOH		
SEI-113	0	0-7	009.00	Soil	0-7-09	Normal Sample	1	AJ	8/14/2014	5:00 PM	Grab	MJM	8/14/2014	5:30 PM	N/A	MeOH		
SEI-114	0	0-7	015.00	Soil	0-7-15	Normal Sample	1	AJ	8/14/2014	5:15 PM	Grab	MJM	8/14/2014	5:30 PM	N/A	MeOH		
SEI-115	0	0-7	017.00	Soil	0-7-17	Normal Sample	1	AJ	8/14/2014	5:17 PM	Grab	MJM	8/14/2014	5:30 PM	N/A	MeOH		
SEI-116	0	1-7	017.50	GW	1-7 (17.5-19.5)	Normal Sample	2	AJ	8/14/2014	4:15 PM	Grab	MJM	8/14/2014	5:30 PM	N/A			
SEI-117	0	2.5-5	010.00	GW	2.5-5 (10-13)	Normal Sample	2	AJ	8/15/2014	8:53 AM	Grab	MJM	8/15/2014	9:45 AM	N/A		SEI-117	
SEI-118	0	2.5-5	013.50	GW	2.5-5 (13.5-16.5)	Normal Sample	2	AJ	8/15/2014	9:10 AM	Grab	MJM	8/15/2014	9:45 AM	N/A			
SEI-119	0	2.5-5	017.00	GW	2.5-5 (17-20)	Normal Sample	2	AJ	8/15/2014	9:45 AM	Grab	MJM	8/15/2014	10:00 AM	N/A			
SEI-120	0	4-4	010.00	GW	4-4 (10-13)	Normal Sample	2	AJ	8/15/2014	10:35 AM	Grab	MJM	8/15/2014	11:00 AM	N/A			

Lab ID	Pct Moisture	Location ID	Depth	Matrix	Sample Name	Sample Code	Quantity	Collected By	Collected Date	Collected Time	Collection Method	Received By	Received Date	Received Time	Received Temp	Preservative	Lab ID_Parent	Comments
SEI-121	0	4-4	013.50	GW	4-4 (13.5-16.5)	Normal Sample	2	AJ	8/15/2014	10:37 AM	Grab	MJM	8/15/2014	11:00 AM	N/A			
SEI-122	0	4-4	017.00	GW	4-4 (17-20)	Normal Sample	2	AJ	8/15/2014	11:12 AM	Grab	MJM	8/15/2014	11:30 AM	N/A			
SEI-117-MS	0	2.5-5	010.00	GW	2.5-5 (10-13)-MS	Matrix Spike	2	MJM	8/15/2014	11:53 AM	Grab	MJM	8/15/2014	11:53 AM	N/A		2.5-5 (10-13)	
SEI-117-MSD	0	2.5-5	010.00	GW	2.5-5 (10-13)-MSD	Matrix Spike Duplicate	2	MJM	8/15/2014	11:53 AM	Grab	MJM	8/15/2014	11:53 AM	N/A		2.5-5 (10-13)	
SEI-125	0	1-10	005.00	Soil	1-10-05	Normal Sample	1	AJ	8/15/2014	11:32 AM	Grab	MJM	8/15/2014	12:00 PM	N/A	MeOH		
SEI-126	0	1-10	010.00	Soil	1-10-10	Normal Sample	1	AJ	8/15/2014	11:37 AM	Grab	MJM	8/15/2014	12:00 PM	N/A	MeOH		
SEI-127	0	1-10	015.00	Soil	1-10-15	Normal Sample	1	AJ	8/15/2014	11:45 AM	Grab	MJM	8/15/2014	12:00 PM	N/A	MeOH		
SEI-128	0	1-10	005.01	GW	1-10 (5-8)	Normal Sample	2	AJ	8/15/2014	12:17 PM	Grab	MJM	8/15/2014	12:30 PM	N/A			
SEI-129	0	1-10	010.01	GW	1-10 (10-13)	Normal Sample	2	AJ	8/15/2014	12:15 PM	Grab	MJM	8/15/2014	12:30 PM	N/A			
SEI-130	0	1-10	008.00	GW	1-10 (8-10)	Normal Sample	2	AJ	8/15/2014	12:45 PM	Grab	MJM	8/15/2014	12:50 PM	N/A			
SEI-131	0	2-8	005.00	Soil	2-8-05	Normal Sample	1	AJ	8/15/2014	1:30 PM	Grab	MJM	8/15/2014	1:45 PM	N/A	MeOH		
SEI-132	0	2-8	010.00	Soil	2-8-10	Normal Sample	1	AJ	8/15/2014	1:30 PM	Grab	MJM	8/15/2014	1:45 PM	N/A	MeOH		
SEI-133	0	2-8	015.00	Soil	2-8-15	Normal Sample	1	JL	8/15/2014	1:30 PM	Grab	MJM	8/15/2014	1:45 PM	N/A	MeOH		
SEI-134	0	2-8	020.00	Soil	2-8-20	Normal Sample	1	JL	8/15/2014	1:30 PM	Grab	MJM	8/15/2014	1:45 PM	N/A	MeOH		

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 Parson's GAFB

Project Location: Rome NY

Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
1-1-10	AJ	8/11/14	0900	MJM	8/11/14	0935	2	2	1	3		✓		SE1-1	MJM	183 - 45.19
1-1-17	AJ	8/11/14	0918			0935	2	2	1	3		✓		SE1-2		184 - 45.41
1-2-17	AJ		1010			1043	2	2	1	3		✓		SE1-3		185 - 47.49
1-3-16	AJ		1030			1043	2	2	1	3		–		SE1-4		186 - 47.84
1-4-15	AJ		1050			1131	2	2	1	3		–		SE1-5		187 - 44.38
1-4-16	AJ		1055			1131	2	2	1	3		–		SE1-6		188 - 45.50
1-5-15	AJ		1145			1245	2	2	1	3		–		SE1-7		189 - ~~47.95~~ 47.06
1-5-16	AJ		1145			1245	2	2	1	3		–		SE1-8		190 - 45.77
1-6-10	AJ		1310			1335	2	2	1	3		–		SE1-9		191 - 46.39
1-6-16	AJ		1320			1335	2	2	1	3		–		SE1-10		192 - 46.49
2-5-20	AJ		1510			1512	2	2	1	3		–		SE1-11		201 44.38
2-5-18	AJ		1440			1512	2	2	1	3		✓		SE1-12		193 - 45.91
2-6-17	AJ		1410			1512	2	2	1	3		–		SE1-13		195 - 47.84
2-5-16	AJ		1440			1512	2	2	1	3		–		SE1-14		196 - 46.74
2-4-18	AJ		1537			1545	2	2	1	3		~		SE1-15		198 47.31
2-4-17	AJ		1536			1545	2	2	1	3		–		SE1-16		199 - 44.98
2-4-16	AJ		1535			1545	2	2	1	3		–		SE1-17		200 - 45.27
2-3-18	AJ		4:20			1629	2	2	1	3		✓		SE1-18		194 - 45.89
2-3-17	AJ		420			1629	2	2	1	3		–		SE1-19		197 - 47.08
2-3-16	AJ	↓	4:20	↓	↓	1630	2	2	1	3		–		SE1-20	↓	202 - 46.39

* Type of Sample: (1) water (2) soil

** Container: (1) bag (2) bottle (3) other _____

*** Preservation: (1) ice (2) HCl (3) Other Meoh

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L:\RASC\Analytical\Forms\Moblie Lab 2 – Sample Log Sheet.doc
C:\Forms\Mobile Lab 2 – Sample Log Sheet.doc

Mobile Lab 1 is VIN# 1UK500G29V1022699 Mobil Lab 2 is VIN# 1UK500F2541047129
Truck 2 is VIN# JW6CEJ1G7SL002457

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 - Parson's GAFB

Project Location: Rome NY

Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
2-2-17	AJ	8/11/14	1705	MJM	8/11/14	1720	2	2	1	3		X		SE1-21	MJM	202 - 47.72
2-2-14	AJ	8/11/14	1705	MJM		1720	2	2	1	3		X		SE1-22		203 - 45.34
2-1-20	AJ	8/12/14	0830	MJM	8/12/14	0900	2	2	1	3		X		SE1-23		207 - 43.99
2-1-17	AJ		0825			0900	2	2	1	3		X		SE1-24		208 - 47.62
2-1-14	AJ		0820			0900	2	2	1	3		X		SE1-25		209 - 47.23
3-1-15	AJ		0850			1000	2	2	1	3		X		SE1-26		206 - 47.86
3-1-18	AJ		0910			1000	2	2	1	3		X		SE1-27		205 - 47.74
3-2-16	AJ		0935			1000	2	2	1	3		X		SE1-28		210 - 48.25
3-2-19	AJ		0936			1000	2	2	1	3		X		SE1-29		211 - 48.09
3-3-16	AJ		1015			1025	2	2	1	3		X		SE1-30		212 - 47.32
3-3-19	AJ		1015			1025	2	2	1	3		X		SE1-31		213 - 47.88
3-4-16	AJ		1100			1106	2	2	1	3		X		SE1-32		214 - 49.66
3-4-19	AJ		1100			1106	2	2	1	3		X		SE1-33		226 - 42.64
3-6-14	AJ		1140			1200	2	2	1	3		X		SE1-34		218 - 48.47
3-6-18	AJ		1150			1200	2	2	1	3		X		SE1-35		220 - 47.05
3-5-15	AJ		1117			1200	2	2	1	3		X		SE1-36		216 - 47.88
3-5-16	AJ		1120			1200	2	2	1	3		X		SE1-37		215 - 49.24
3-5-20	AJ		1123			1200	2	2	1	3		X		SE1-38		217 - 46.56
4-6-14	AJ		1300			1420	2	2	1	3		X		SE1-39		219 - 47.01
4-6-19	AJ	↓	1302	↓	↓	1420	2	2	1	3		X		SE1-40		221 - 48.94

Sampling in accordance with Method / SEI SOP:
- ☐ SEI 10.5.n Groundwater Profiling and KPRO Testing.
- ☐ _____

* Type of Sample: (1) water (2) soil

** Container: (1) bag (2) bottle (3) other _____

*** Preservation: (1) ice (2) HCl (3) Other MeOH

STONE ENVIRONMENTAL INC

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 Parsons GAFB.
Project Location: Rome NY.

	Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
*	4-6-19 - MS	MJM	8/12/14	1420	MJM	8/12/14	1420	2	2	-	3		X		SE1-40-MS	MJM	
*	4-6-19 - MSD	MJM	8/12/14	1420	MJM		1426	2	2	-	3		X		SE1-40-MSD		
	4-5-16	AJ	8/12/14	1320			1420	2	2	1	3		X		SE1-43		222 - 48.33
	4-5-20			1323			1420	2	2	1	3		X		SE1-44		223 - 49.13
	4-4-15			1400			1420	2	2	1	3		X		SE1-45		224 - 48.33
	4-4-18			1410			1420	2	2	1	3		X		SE1-46		225 - 48.10
	4-3-15			1410			1530	2	2	1	3		X		SE1-47		238 - 49.58
	4-3-18			1450			1530	2	2	1	3		X		SE1-48		233 - 47.54
	4-2-16			1515			1530	2	2	1	3		X		SE1-49		237 - 47.10
	4-2-18			1515			1530	2	2	1	3		X		SE1-50		236 - 47.98
	4-1-14			1530			1530	2	2	1	3		X		SE1-51		234 - 48.19
	4-1-18			1535			1600	2	2	1	3		X		SE1-52		235 - 47.69
	5-1-14			1620			1745	2	2	1	3		X		SE1-53		227 - 48.70
	5-1-19			1630			1745	2	2	1	3		X		SE1-54		228 - 48.13
	5-2-14			1645			1745	2	2	1	3		X		SE1-55		229 - 49.65
	5-2-19			1655			1745	2	2	1	3		X		SE1-56		230 - 46.91
	5-3-14			1710			1745	2	2	1	3		X		SE1-57		231 - 46.08
	5-3-18			1730			1745	2	2	1	3		X		SE1-58		239 - 47.21
	5-3-19	↓	↓	1735	↓	↓	1745	2	2	1	3		X		SE1-59		232 - 46.24
	2-7-17	AJ	8/13/14	0920	MJM	8/13/14	1043	2	2	1	3		X		SE1-60	↓	245 - 46.53

* Type of Sample: (1) water (2) soil
** Container: (1) bag (2) bottle (3) other M
*** Preservation: (1) ice (2) HCl (3) Other MeOH

STONE ENVIRONMENTAL INC

* MS/MSD pair created as per MDR by prepping soil sample in extraction vial and spiking w/ 8/4/14-a1 prior to extraction and subsequent analysis

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 - Parsons GAFB

Project Location: Rome NY

Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other ____	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
2-7-19	AJ	8/13/14	0925	MJM	8/13/14	1043	2	2	1	3		X		SE1-61	MJM	244 - 46.00
3-7-11	"	"	0955	"	"	1043	2	2	1	3		X		SE1-62	"	243 - 45.61
3-7-14	"	"	0957	"	"	1043	2	2	1	3		X		SE1-63	"	242 - 48.64
3-7-19	"	"	1020	"	"	1043	2	2	1	3		X		SE1-64	"	241 - 49.23
1-7-15	"	"	1047	"	"	1200	2	2	1	3		X		SE1-65	"	240 - 47.59
1-7-17	"	"	1053	"	"	1206	2	2	1	3		X		SE1-66	"	251 - 46.76
1-2-16	"	"	1105	"	"	1200	2	2	1	3		X		SE1-67	"	250 - 48.44
1-2-17D	"	"	1106	"	"	1200	2	2	1	3		X		SE1-68	"	248 - 46.17
1-2-19	"	"	1107	"	"	1200	2	2	1	3		X		SE1-69	"	249 - 47.28
1-2(10-13)	"	"	1311	"	"	1330	1	2	2	—		X		SE1-70	"	~~ES~~ MJM 8/13/14
1-2(13.5-16.5)	"	"	1307	"	"	1330	1	2	2	—		X		SE1-71	"	
1-2(16.5-18)	"	"	1355	"	"	1415	1	2	2	—		X		SE1-72	"	
1-5(10-13)	"	"	1405	"	"	1415	1	2	2	—		X		SE1-73	"	
1-5(13.5-16.5)	"	"	1442	"	"	1530	1	2	2	—		X		SE1-74	"	
1-5(17-20)	"	"	1513	"	"	1530	1	2	2	—		X		SE1-75	"	
5-4-14	"	"	1547	"	"	1630	2	2	1	3		X		SE1-76	"	253 - 46.03
5-4-18	"	"	1551	"	"	1630	2	2	1	3		X		SE1-77	"	254 - 46.70
5-4-20	"	"	1600	"	"	1630	2	2	1	3		X		SE1-78	"	255 - 47.21
5-5-9	"	"	1610	"	"	1630	2	2	1	3		X		SE1-79	"	252 - 45.94
5-5-13	AJ	8/13/14	1620	MJM	8/13/14	1630	2	2	1	3		X		SE1-80	MJM	247 - 47.03

* Type of Sample: (1) water (2) soil

** Container: (1) bag (2) bottle (3) other _____

*** Preservation: (1) ice (2) HCl (3) Other HNO3

STONE ENVIRONMENTAL INC

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 Parsons GAFB

Project Location: Rome NY

Sampling in accordance with Method / SEI SOP:
☐ SEI 10.5.n Groundwater Profiling and KPRO Testing.
☐ _____

Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other _____	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
5-5-18	AJ	8/13/14	1625	MJM	8/13/14	1630	2	2	1	3		X		SE1-81	MJM	246 - 48.14
1-8-14	AJ	8/14/14	0830	MJM	8/14/14	1045	2	2	1	3		X		SE1-82	MJM	263 - 47.93
1-8-16	AJ	"	0845	"	"	1045	2	2	1	3		X		SE1-83	"	262 - 46.68
2.5-6-14	"	"	0910	"	"	1045	2	2	1	3		X		SE1-84	"	257 - 48.02
2.5-6-18	"	"	0920	"	"	1045	2	2	1	3		X		SE1-85	"	259 - 49.83
2.5-5-15	"	"	0955	"	"	1045	2	2	1	3		X		SE1-86	"	261 - 47.91
2.5-5-18	"	"	1005	"	"	1045	2	2	1	3		X		SE1-87	"	260 - 53.65
2.5-4-14	"	"	1030	"	"	1045	2	2	1	3		X		SE1-88	"	258 - 49.70
* 2.5-4-18	AJ	"	1038	"	"	1045	2	2	1	3		X		SE1-89	"	256 - 47.17
2.5-4-18-MS	MJM	"	1045	"	"	1045	2	2	-	3		X		SE1-89-MS	"	
2.5-4-18-MSD	MJM	"	1045	"	"	1045	2	2	-	3		X		SE1-89-MSD	"	
2.5-3-15	AJ	"	1113	"	"	1230	2	2	1	3		X		SE1-92	"	270 - 47.73
2.5-3-19	"	"	1130	"	"	1230	2	2	1	3		X		SE1-93	"	271 - 50.48
2.5-2-18	"	"	1205	"	"	1230	2	2	1	3		X		SE1-94	"	266 - 46.32
2.5-2-20	"	"	1210	"	"	1230	2	2	1	3		X		SE1-95	"	272 - 48.67
2.5-1-5	"	"	1240	"	"	1400	2	2	1	3		X		SE1-96	"	273 - 44.64
2.5-1-10	"	"	1250	"	"	1400	2	2	1	3		X		SE1-97	"	264 - 46.97
2.5-1-15	"	"	1300	"	"	1400	2	2	1	3		X		SE1-98	"	274 - 46.62
2.5-1-19	"	"	1315	"	"	1400	2	2	1	3		X		SE1-99 ①	"	275 - 47.98
5-0-5	AJ	8/14/14	1328	MJM	8/14/14	1400	2	2	1	3		X		SE1-100	MJM	268 - 47.66

* Type of Sample: (1) water (2) soil
** Container: (1) bag (2) bottle (3) other _____
*** Preservation: (1) ice (2) HCl (3) Other MeOH

STONE ENVIRONMENTAL INC

* Created MS/MSD pair w/ this sample.

① @ KBM, 8/19/2014

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 Parson's GAFB

Project Location: Rome NY

Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
5-0-10	AJ	8/14/14	1334	MJM	8/14/14	1400	2	2	1	3		X		SE1-101	MJM	267 - 46.81
5-0-13			1340			1400	2	2	1	3		X		SE1-102		265 - 46.65
5-0-20			1356			1400	2	2	1	3		X		SE1-103		269 - 47.47
1-7(10-13)			1545			1700	1	2	2	–		X		SE1-104		
1-7(13.6-16.5)			1550			1700	1	2	2	–		X		SE1-105		
5-3(10-13)			1428			1700	1	2	2	–		X		SE1-106		
5-3(13.5-16.5)	↓		1431			1700	1	2	2	–		X		SE1-107		
5-3(17-19)	AJ		1510			1700	1	2	2	–		X		SE1-108		
MH-2	IB		1715			1730	1	2	2	–		X		SE1-109		
1-9-10	AJ		1637			1730	2	2	1	3		X		SE1-110		282 - 46.54
1-9-12			1640			1730	2	2	1	3		X		SE1-111		279 - 46.95
1-9-14			1642			1730	2	2	1	3		X		SE1-112		281 - 46.67
0-7-9			1700			1730	2	2	1	3		X		SE1-113		284 - 47.42
0-7-15			1715			1730	2	2	1	3		X		SE1-114		280 - 48.32
07-17			1717			1730	2	2	1	3		X		SE1-115		278 - 50.21
1-7(17.5-19.5)	↓	↓	1615	↓	↓	1730	1	2	2	–		X		SE1-116		
2.5-5(10-13)	AJ	8/15/14	0853	MJM	8/15/14	0945	1	2	2	–		X		SE1-117		
2.5-5(13.5-16.5)			0910			0945	1	2	2	–		X		SE1-118		
2.5-5(17-20)			0945			1000	1	2	2	–		X		SE1-119		
4-4(10-13)	↓	↓	1035	↓	↓	1100	1	2	2	–		X		SE1-120	↓	

Sampling in accordance with Method / SEI SOP:
- ☐ SEI 10.5.n Groundwater Profiling and KPRO Testing.
- ☐ _____

* Type of Sample: (1) water (2) soil

** Container: (1) bag (2) bottle (3) other _____

*** Preservation: (1) ice (2) HCl (3) Other Meoh

STONE ENVIRONMENTAL INC

Mobile Lab 2 – SAMPLE LOG SHEET

Project ID: 14-152 Parsons GAFB

Project Location: Rome NY

Sampling in accordance with Method / SEI SOP:
☐ SEI 10.5.n Groundwater Profiling and KPRO Testing.
☐ _____

Sample ID	Collected By	Collected Date	Collected Time	Received By	Received Date	Received Time	Type*	Container**	Number of Containers	Preservation***	Analysis: ASTM D6520 & Modified 8021/8015	Analysis: 8260	Analysis: Other _____	Lab ID	Analyst	Comments Or Vial ID / Final Wt(g)
4-4 (13.5-16.5)	AJ	8/15/14	1037	MJM	8/15/14	1100	1	2	2	–		X		SE1-121	MJM	
4-4 (17-20)	AJ		1112			1130	1	2	2	–		X		SE1-122		
2.5-5(10-13)-MS	MJM		1153			1153	1	2	0	–		X		SE1-117-MS		
2.5-5(10-13)-MSD	MJM		1153			1153	1	2	0	–		X		SE1-117-MSD		
1-10-5	AJ		1132			1200	2	2	1	3		X		SE1-125		277 - 45.17
1-10-10			1137			1200	2	2	1	3		X		SE1-126		285 - 48.45
1-10-15			1145			1200	2	2	1	3		X		SE1-127		283 - 46.56
1-10(5-8)			1217			1230	1	2	2	–		X		SE1-128		
1-10(10-13)			1215			1230	1	2	2	–		X		SE1-129		
1-10(8-10)	↓		1245			1250	1	2	2	–		X		SE1-130		
2-8-5	JL		1330			1345	2	2	1	3		X		SE1-131		288 - 43.23
2-8-10			1330			1345	2	2	1	3		X		SE1-132		287 - 43.62
2-8-15			1330			1345	2	2	1	3		X		SE1-133		286 - 43.53
2-8-20	↓	↓	1330	↓	↓	1345	2	2	1	3		X		SE1-134	↓	276 - 45.27

* Type of Sample: (1) water (2) soil

** Container: (1) bag (2) bottle (3) other _____

*** Preservation: (1) ice (2) HCl (3) Other MeOH

STONE ENVIRONMENTAL INC

L:\RASC\Analytical\Forms\Moblie Lab 2 – Sample Log Sheet.doc
C:\Forms\Mobile Lab 2 – Sample Log Sheet.doc

Mobile Lab 1 is VIN# 1UK500G29V1022699 Mobil Lab 2 is VIN# 1UK500F2541047129
Truck 2 is VIN# JW6CEJ1G7SL002457

LabID	Location ID	Sample Name	Container ID	Depth	Initial Mass (g)	Final Vial Mass (g)	Final Sample Weight (g)
SEI-1	1-1	1-1-10	183-VOC	010.00	36.96	45.19	8.23
SEI-2	1-1	1-1-17	184-VOC	017.00	36.81	45.41	8.6
SEI-3	1-2	1-2-17	185-VOC	017.00	37.16	47.49	10.33
SEI-4	1-3	1-3-16	186-VOC	016.00	37.37	47.84	10.47
SEI-5	1-4	1-4-15	187-VOC	015.00	37.02	44.38	7.36
SEI-6	1-4	1-4-16	188-VOC	016.00	37.36	45.5	8.14
SEI-7	1-5	1-5-15	189-VOC	015.00	37.39	47.06	9.67
SEI-8	1-5	1-5-16	190-VOC	016.00	37.01	45.77	8.76
SEI-9	1-6	1-6-10	191-VOC	010.00	37.15	46.39	9.24
SEI-10	1-6	1-6-16	192-VOC	016.00	37.33	46.49	9.16
SEI-11	2-5	2-5-20	201-VOC	020.00	37.07	44.38	7.31
SEI-12	2-5	2-5-18	193-VOC	018.00	37.22	45.91	8.69
SEI-13	2-6	2-6-17	195-VOC	017.00	36.9	47.89	10.99
SEI-14	2-5	2-5-16	196-VOC	016.00	37.18	46.74	9.56
SEI-15	2-4	2-4-18	198-VOC	018.00	37.25	47.31	10.06
SEI-16	2-4	2-4-17	199-VOC	017.00	37.12	44.98	7.86
SEI-17	2-4	2-4-16	200-VOC	016.00	36.95	45.27	8.32
SEI-18	2-3	2-3-18	194-VOC	018.00	37.01	45.89	8.88
SEI-19	2-3	2-3-17	197-VOC	017.00	36.71	47.08	10.37
SEI-20	2-3	2-3-16	204-VOC	016.00	37.41	46.39	8.98
SEI-21	2-2	2-2-17	202-VOC	017.00	37.06	47.72	10.66
SEI-22	2-2	2-2-14	203-VOC	014.00	36.8	45.34	8.54
SEI-23	2-1	2-1-20	207-VOC	020.00	37.26	43.99	6.73
SEI-24	2-1	2-1-17	208-VOC	017.00	36.97	47.62	10.65
SEI-25	2-1	2-1-14	209-VOC	014.00	37.21	47.23	10.02
SEI-26	3-1	3-1-15	206-VOC	015.00	37.25	47.86	10.61
SEI-27	3-1	3-1-18	205-VOC	018.00	37.23	47.74	10.51
SEI-28	3-2	3-2-16	210-VOC	016.00	37.19	48.25	11.06
SEI-29	3-2	3-2-19	211-VOC	019.00	37.07	48.09	11.02
SEI-30	3-3	3-3-16	212-VOC	016.00	37.19	47.32	10.13
SEI-31	3-3	3-3-19	213-VOC	019.00	36.84	47.88	11.04
SEI-32	3-4	3-4-16	214-VOC	016.00	37.2	49.69	12.49
SEI-33	3-4	3-4-19	226-VOC	019.00	37.35	42.64	5.29
SEI-34	3-6	3-6-14	218-VOC	014.00	37.14	48.47	11.33
SEI-35	3-6	3-6-18	220-VOC	018.00	36.81	47.05	10.24
SEI-36	3-5	3-5-15	216-VOC	015.00	37.23	47.88	10.65
SEI-37	3-5	3-5-16	215-VOC	016.00	37.28	49.24	11.96
SEI-38	3-5	3-5-20	217-VOC	020.00	37.13	46.56	9.43
SEI-39	4-6	4-6-14	219-VOC	014.00	36.56	47.01	10.45
SEI-40	4-6	4-6-19	221-VOC	019.00	37.09	48.94	11.85
SEI-40-MS	4-6	4-6-19-MS	221-VOC	019.00	37.09	48.94	11.85
SEI-40-MSD	4-6	4-6-19-MSD	221-VOC	019.00	37.09	48.94	11.85
SEI-43	4-5	4-5-16	222-VOC	016.00	37.19	48.33	11.14
SEI-44	4-5	4-5-20	223-VOC	020.00	37.03	49.13	12.1
SEI-45	4-4	4-4-15	224-VOC	015.00	37.04	48.33	11.29
SEI-46	4-4	4-4-18	225-VOC	018.00	37.32	48.1	10.78
SEI-47	4-3	4-3-15	238-VOC	015.00	37.22	49.58	12.36
SEI-48	4-3	4-3-18	233-VOC	018.00	37.03	47.54	10.51
SEI-49	4-2	4-2-16	237-VOC	016.00	37.09	47.1	10.01
SEI-50	4-2	4-2-18	236-VOC	018.00	37.49	47.98	10.49
SEI-51	4-1	4-1-14	234-VOC	014.00	37.51	48.19	10.68
SEI-52	4-1	4-1-18	235-VOC	018.00	37.42	47.69	10.27
SEI-53	5-1	5-1-14	227-VOC	014.00	37.1	48.7	11.6

LabID	Location ID	Sample Name	Container ID	Depth	Initial Mass (g)	Final Vial Mass (g)	Final Sample Weight (g)
SEI-54	5-1	5-1-19	228-VOC	019.00	37.45	48.13	10.68
SEI-55	5-2	5-2-14	229-VOC	014.00	37.68	49.65	11.97
SEI-56	5-2	5-2-19	230-VOC	019.00	36.92	46.91	9.99
SEI-57	5-3	5-3-14	231-VOC	014.00	36.88	46.08	9.2
SEI-58	5-3	5-3-18	239-VOC	018.00	36.9	47.21	10.31
SEI-59	5-3	5-3-19	232-VOC	019.00	37.3	46.24	8.94
SEI-60	2-7	2-7-17	245-VOC	017.00	36.92	46.53	9.61
SEI-61	2-7	2-7-19	244-VOC	019.00	37.39	46	8.61
SEI-62	3-7	3-7-11	243-VOC	011.00	37.51	45.61	8.1
SEI-63	3-7	3-7-14	242-VOC	014.00	37.23	48.64	11.41
SEI-64	3-7	3-7-19	241-VOC	019.00	37.67	49.23	11.56
SEI-65	1-7	1-7-15	240-VOC	015.00	37.02	47.59	10.57
SEI-66	1-7	1-7-17	251-VOC	017.00	37.22	46.76	9.54
SEI-67	1-2	1-2-16	250-VOC	016.00	37.24	48.44	11.2
SEI-68	1-2	1-2-17D	248-VOC	017.01	37.1	46.17	9.07
SEI-69	1-2	1-2-19	249-VOC	019.00	37.16	47.28	10.12
SEI-76	5-4	5-4-14	253-VOC	014.00	37.03	46.03	9
SEI-77	5-4	5-4-18	254-VOC	018.00	37.1	46.7	9.6
SEI-78	5-4	5-4-20	255-VOC	020.00	37.07	47.21	10.14
SEI-79	5-5	5-5-09	252-VOC	009.00	37.11	45.94	8.83
SEI-80	5-5	5-5-13	247-VOC	013.00	36.87	47.03	10.16
SEI-81	5-5	5-5-18	246-VOC	018.00	37.6	48.14	10.54
SEI-82	1-8	1-8-14	263-VOC	014.00	37.48	47.93	10.45
SEI-83	1-8	1-8-16	262-VOC	016.00	37.53	46.68	9.15
SEI-84	2.5-6	2.5-6-14	257-VOC	014.00	37.22	48.02	10.8
SEI-85	2.5-6	2.5-6-18	259-VOC	018.00	37.3	49.83	12.53
SEI-86	2.5-5	2.5-5-15	261-VOC	015.00	36.96	47.91	10.95
SEI-87	2.5-5	2.5-5-18	260-VOC	018.00	37.36	53.65	16.29
SEI-88	2.5-4	2.5-4-14	258-VOC	014.00	36.94	49.7	12.76
SEI-89	2.5-4	2.5-4-18	256-VOC	018.00	37.31	47.17	9.86
SEI-89-MS	2.5-4	2.5-4-18-MS	256-VOC	018.00	37.31	47.17	9.86
SEI-89-MSD	2.5-4	2.5-4-18-MSD	256-VOC	018.00	37.31	47.17	9.86
SEI-92	2.5-3	2.5-3-15	270-VOC	015.00	37.46	47.73	10.27
SEI-93	2.5-3	2.5-3-19	271-VOC	019.00	37.41	50.48	13.07
SEI-94	2.5-2	2.5-2-18	266-VOC	018.00	36.68	46.82	10.14
SEI-95	2.5-2	2.5-2-20	272-VOC	020.00	36.99	48.67	11.68
SEI-96	2.5-1	2.5-1-05	273-VOC	005.00	37.37	44.61	7.24
SEI-97	2.5-1	2.5-1-10	264-VOC	010.00	37.59	46.97	9.38
SEI-98	2.5-1	2.5-1-15	274-VOC	015.00	37.27	46.62	9.35
SEI-99	2.5-1	2.5-1-19	275-VOC	019.00	37.5	47.98	10.48
SEI-100	5-0	5-0-05	268-VOC	005.00	37.22	47.66	10.44
SEI-101	5-0	5-0-10	267-VOC	010.00	37.34	46.81	9.47
SEI-102	5-0	5-0-13	265-VOC	013.00	37.43	46.65	9.22
SEI-103	5-0	5-0-20	269-VOC	020.00	37.4	47.47	10.07
SEI-110	1-9	1-9-10	282-VOC	010.00	36.83	46.54	9.71
SEI-111	1-9	1-9-12	279-VOC	012.00	37.33	46.95	9.62
SEI-112	1-9	1-9-14	281-VOC	014.00	36.89	46.67	9.78
SEI-113	0-7	0-7-09	284-VOC	009.00	37.45	47.42	9.97
SEI-114	0-7	0-7-15	280-VOC	015.00	37.41	48.32	10.91
SEI-115	0-7	0-7-17	278-VOC	017.00	37.39	50.21	12.82
SEI-125	1-10	1-10-05	277-VOC	005.00	37.4	45.17	7.77
SEI-126	1-10	1-10-10	285-VOC	010.00	37.46	48.45	10.99
SEI-127	1-10	1-10-15	283-VOC	015.00	36.76	46.56	9.8

Sample Weight Summary

LabID	Location ID	Sample Name	Container ID	Depth	Initial Mass (g)	Final Vial Mass (g)	Final Sample Weight (g)
SEI-131	2-8	2-8-05	288-VOC	005.00	37.34	43.23	5.89
SEI-132	2-8	2-8-10	287-VOC	010.00	37.23	43.62	6.39
SEI-133	2-8	2-8-15	286-VOC	015.00	37.31	43.53	6.22
SEI-134	2-8	2-8-20	276-VOC	020.00	37.36	45.27	7.91

LABORATORY ANALYTICAL RESULTS

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as dry weight
Location ID:	0-7	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	009.00		015.00		017.00	
Sample Name		0-7-09		0-7-15		0-7-17	
Analysis Date		08/14/14 22:25	N	08/14/14 22:42	N	08/14/14 23:00	N
Vinyl Chloride	75-01-4	80.2	U	73.3	U	62.4	U
trans-1,2-Dichloroethene	156-60-5	80.2	U	73.3	U	62.4	U
cis-1,2-Dichloroethene	156-59-2	80.2	U	73.3	U	62.4	U
Trichloroethene	79-01-6	39.3	J	117		62.4	U
Tetrachloroethene	127-18-4	80.2	U	73.3	U	62.4	U
Bromofluorobenzene (SS)	460-00-4	69	%	78	%	80	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	1-1	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		017.00	
Sample Name		1-1-10		1-1-17	
Analysis Date		08/11/14 10:38	N	08/11/14 10:57	N
Vinyl Chloride	75-01-4	97.2	U	93.0	U
trans-1,2-Dichloroethene	156-60-5	97.2	U	93.0	U
cis-1,2-Dichloroethene	156-59-2	97.2	U	93.0	U
Trichloroethene	79-01-6	97.2	U	93.0	U
Tetrachloroethene	127-18-4	97.2	U	93.0	U
Bromofluorobenzene (SS)	460-00-4	80	%	80	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/15/2014 - 08/15/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/15/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW & Soils	**Results Given as:**	ug/L Waters, ug/kg Soils as received wet weight
Location ID:	1-10	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth		005.00		005.01		008.00		010.00		010.01		015.00	
Sample Name	**CAS #**	1-10-05		1-10 (5-8)		1-10 (8-10)		1-10-10		1-10 (10-13)		1-10-15	
Analysis Date		08/15/14 12:57	N	08/15/14 13:49	N	08/15/14 14:21	N	08/15/14 13:14	N	08/15/14 14:06	N	08/15/14 13:31	N
Vinyl Chloride	75-01-4	103	U	2.00	U	2.00	U	72.8	U	2.00	U	81.6	U
trans-1,2-Dichloroethene	156-60-5	103	U	2.00	U	2.00	U	72.8	U	2.00	U	81.6	U
cis-1,2-Dichloroethene	156-59-2	103	U	2.00	U	2.00	U	72.8	U	2.00	U	81.6	U
Trichloroethene	79-01-6	34.5	J	13.1		9.54		598		147		2420	
Tetrachloroethene	127-18-4	103	U	2.00	U	2.00	U	505		4.11		81.6	U
Bromofluorobenzene (SS)	460-00-4	82	%	84	%	80	%	84	%	82	%	83	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/13/2014 - 08/13/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW and Soil	**Results Given as:**	ug/L Water, ug/kg Soil as received wet weight
Location ID:	1-2	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth		010.00		013.50		016.00		016.50		017.00		017.01		019.00	
Sample Name	**CAS #**	1-2(10-13)		1-2(13.5-16.5)		1-2-16		1-2(16.5-18)		1-2-17		1-2-17D		1-2-19	
Analysis Date		08/13/14 17:50	N	08/13/14 18:07	N	08/13/14 16:57	N	08/13/14 18:24	N	08/11/14 11:16	N	08/13/14 17:15	N	08/13/14 17:32	N
Vinyl Chloride	75-01-4	2.00	U	2.00	U	71.4	U	2.00	U	77.4	U	88.2	U	79.1	U
trans-1,2-Dichloroethene	156-60-5	2.00	U	2.00	U	71.4	U	2.00	U	77.4	U	88.2	U	79.1	U
cis-1,2-Dichloroethene	156-59-2	2.00	U	7.80		26.8	J	73.6		77.4	U	88.2	U	79.1	U
Trichloroethene	79-01-6	0.990	J	2.00	U	82.9		7.95		162		88.2	U	79.1	U
Tetrachloroethene	127-18-4	2.00	U	2.00	U	71.4	U	2.00	U	77.4	U	88.2	U	79.1	U
Bromofluorobenzene (SS)	460-00-4	84	%	76	%	67	%	76	%	80	%	86	%	74	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C,8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	1-3	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	016.00 1-3-16 08/11/14 11:34	
Vinyl Chloride	75-01-4	76.4	U
trans-1,2-Dichloroethene	156-60-5	76.4	U
cis-1,2-Dichloroethene	156-59-2	76.4	U
Trichloroethene	79-01-6	76.4	U
Tetrachloroethene	127-18-4	76.4	U
Bromofluorobenzene (SS)	460-00-4	81	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	1-4	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	015.00		016.00	
Sample Name		1-4-15		1-4-16	
Analysis Date		08/11/14 12:12	N	08/11/14 11:53	N
Vinyl Chloride	75-01-4	109	U	98.3	U
trans-1,2-Dichloroethene	156-60-5	109	U	98.3	U
cis-1,2-Dichloroethene	156-59-2	109	U	98.3	U
Trichloroethene	79-01-6	109	U	98.3	U
Tetrachloroethene	127-18-4	109	U	98.3	U
Bromofluorobenzene (SS)	460-00-4	80	%	86	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/13/2014 - 08/13/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW and Soils	**Results Given as:**	ug/L Water, ug/kg Soils as received wet weight
Location ID:	1-5	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		013.50		015.00		016.00		017.00	
Sample Name		1-5(10-13)		1-5(13.5-16.5)		1-5-15		1-5-16		1-5(17-20)	
Analysis Date		08/13/14 18:59	N	08/13/14 18:41	N	08/11/14 13:22	N	08/11/14 13:41	N	08/13/14 19:16	N
Vinyl Chloride	75-01-4	2.00	U	2.00	U	82.7	U	91.3	U	2.00	U
trans-1,2-Dichloroethene	156-60-5	2.00	U	2.00	U	82.7	U	91.3	U	2.00	U
cis-1,2-Dichloroethene	156-59-2	1.43	J	13.4		82.7	U	91.3	U	2.00	U
Trichloroethene	79-01-6	9.03		5.07		82.7	U	60.7	J	2.00	U
Tetrachloroethene	127-18-4	1.26	J	2.00	U	82.7	U	54.3	J	2.00	U
Bromofluorobenzene (SS)	460-00-4	77	%	73	%	81	%	82	%	74	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	1-6	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		016.00	
Sample Name		1-6-10		1-6-16	
Analysis Date		08/11/14 15:22	N	08/11/14 15:40	N
Vinyl Chloride	75-01-4	86.6	U	87.3	U
trans-1,2-Dichloroethene	156-60-5	86.6	U	87.3	U
cis-1,2-Dichloroethene	156-59-2	86.6	U	87.3	U
Trichloroethene	79-01-6	86.6	U	87.3	U
Tetrachloroethene	127-18-4	86.6	U	87.3	U
Bromofluorobenzene (SS)	460-00-4	81	%	78	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW & Soils	**Results Given as:**	ug/L Waters, ug/kg Soils as received wet weight
Location ID:	1-7	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		013.50		015.00		017.00		017.50	
Sample Name		1-7 (10-13)		1-7 (13.5-16.5)		1-7-15		1-7-17		1-7 (17.5-19.5)	
Analysis Date		08/14/14 23:34	N	08/14/14 23:51	N	08/13/14 16:22	N	08/13/14 16:40	N	08/15/14 00:08	N
Vinyl Chloride	75-01-4	2.00	U	2.00	U	75.7	U	83.9	U	2.00	U
trans-1,2-Dichloroethene	156-60-5	2.00	U	2.00	U	75.7	U	83.9	U	2.00	U
cis-1,2-Dichloroethene	156-59-2	2.00	U	4.90		56.8	J	83.9	U	2.00	U
Trichloroethene	79-01-6	10.6		18.1		1280		572		2.00	U
Tetrachloroethene	127-18-4	7.37		3.80		69.6	J	215		2.00	U
Bromofluorobenzene (SS)	460-00-4	76	%	79	%	74	%	70	%	81	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	1-8	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth		014.00		016.00	
Sample Name	**CAS #**	1-8-14		1-8-16	
Analysis Date		08/14/14 12:54	N	08/14/14 13:12	N
Vinyl Chloride	75-01-4	76.6	U	87.4	U
trans-1,2-Dichloroethene	156-60-5	76.6	U	87.4	U
cis-1,2-Dichloroethene	156-59-2	76.6	U	87.4	U
Trichloroethene	79-01-6	855		195	
Tetrachloroethene	127-18-4	392		87.4	U
Bromofluorobenzene (SS)	460-00-4	81	%	83	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	1-9	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	010.00 1-9-10 08/14/14 21:33		012.00 1-9-12 08/14/14 21:51		014.00 1-9-14 08/14/14 22:08	
Vinyl Chloride	75-01-4	82.4	U	83.2	U	81.8	U
trans-1,2-Dichloroethene	156-60-5	82.4	U	83.2	U	81.8	U
cis-1,2-Dichloroethene	156-59-2	82.4	U	83.2	U	81.8	U
Trichloroethene	79-01-6	35.8	J	688		218	
Tetrachloroethene	127-18-4	81.2	J	313		130	
Bromofluorobenzene (SS)	460-00-4	86	%	82	%	89	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2.5-1	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	005.00		010.00		015.00		019.00	
Sample Name		2.5-1-05		2.5-1-10		2.5-1-15		2.5-1-19	
Analysis Date		08/14/14 19:13	N	08/14/14 19:31	N	08/14/14 19:48	N	08/14/14 20:06	N
Vinyl Chloride	75-01-4	110	U	85.3	U	85.6	U	76.3	U
trans-1,2-Dichloroethene	156-60-5	110	U	85.3	U	85.6	U	76.3	U
cis-1,2-Dichloroethene	156-59-2	110	U	85.3	U	25.2	J	76.3	U
Trichloroethene	79-01-6	110	U	25.6	J	232		76.3	U
Tetrachloroethene	127-18-4	110	U	61.4	J	85.6	U	76.3	U
Bromofluorobenzene (SS)	460-00-4	88	%	85	%	89	%	82	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2.5-2	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	018.00 2.5-2-18 08/14/14 18:38		020.00 2.5-2-20 08/14/14 18:55	
Vinyl Chloride	75-01-4	78.9	U	68.5	U
trans-1,2-Dichloroethene	156-60-5	78.9	U	68.5	U
cis-1,2-Dichloroethene	156-59-2	78.9	U	68.5	U
Trichloroethene	79-01-6	50.5	J	822	
Tetrachloroethene	127-18-4	84.8		68.5	U
Bromofluorobenzene (SS)	460-00-4	79	%	79	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2.5-3	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	015.00 2.5-3-15 08/14/14 23:17		019.00 2.5-3-19 08/14/14 18:20	
Vinyl Chloride	75-01-4	77.9	U	61.2	U
trans-1,2-Dichloroethene	156-60-5	77.9	U	61.2	U
cis-1,2-Dichloroethene	156-59-2	77.9	U	61.2	U
Trichloroethene	79-01-6	79.5		769	
Tetrachloroethene	127-18-4	212		61.2	U
Bromofluorobenzene (SS)	460-00-4	75	%	77	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2.5-4	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	014.00 2.5-4-14 08/14/14 15:15		018.00 2.5-4-18 08/14/14 13:47	
Vinyl Chloride	75-01-4	62.7	UQ	81.1	U
trans-1,2-Dichloroethene	156-60-5	62.7	U	81.1	U
cis-1,2-Dichloroethene	156-59-2	62.7	U	81.1	U
Trichloroethene	79-01-6	62.7	U	81.1	U
Tetrachloroethene	127-18-4	62.7	U	81.1	U
Bromofluorobenzene (SS)	460-00-4	66	%	83	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/15/2014 - 08/15/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/15/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW & Soils	**Results Given as:**	ug/L Waters, ug/kg Soils as received wet weight
Location ID:	2.5-5	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		013.50		015.00		017.00		018.00	
Sample Name		2.5-5 (10-13)		2.5-5 (13.5-16.5)		2.5-5-15		2.5-5 (17-20)		2.5-5-18	
Analysis Date		08/15/14 10:21	N	08/15/14 12:05	N	08/14/14 14:40	N	08/15/14 10:55	N	08/14/14 14:57	N
Vinyl Chloride	75-01-4	2.00	U	2.00	U	73.1	UQ	2.00	U	49.1	UQ
trans-1,2-Dichloroethene	156-60-5	2.00	U	2.00	U	73.1	U	2.00	U	49.1	U
cis-1,2-Dichloroethene	156-59-2	0.680	J	2.00	U	73.1	U	2.00	U	49.1	U
Trichloroethene	79-01-6	38.1		7.03		6300		2.57		33.4	J
Tetrachloroethene	127-18-4	35.6		2.00	U	73.1	U	2.00	U	49.1	U
Bromofluorobenzene (SS)	460-00-4	85	%	85	%	78	%	85	%	74	%

U= Not detected above specified RL
J= Estimated value
Q= Associated with QC failure
E= Estimated value, marginally above calibration level
D= Analyzed at dilution
N= Normal sample
EB= Equip. Blank
B= Blank contam.

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2.5-6	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	014.00 2.5-6-14 08/14/14 13:29		018.00 2.5-6-18 08/14/14 12:37	
Vinyl Chloride	75-01-4	74.1	U	63.8	U
trans-1,2-Dichloroethene	156-60-5	74.1	U	63.8	U
cis-1,2-Dichloroethene	156-59-2	74.1	U	63.8	U
Trichloroethene	79-01-6	74.1	U	63.8	U
Tetrachloroethene	127-18-4	74.1	U	63.8	U
Bromofluorobenzene (SS)	460-00-4	74	%	79	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-1	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	014.00		017.00		020.00	
Sample Name		2-1-14		2-1-17		2-1-20	
Analysis Date		08/12/14 11:42	N	08/12/14 11:24	N	08/12/14 11:07	N
Vinyl Chloride	75-01-4	79.8	U	75.1	U	119	U
trans-1,2-Dichloroethene	156-60-5	79.8	U	75.1	U	119	U
cis-1,2-Dichloroethene	156-59-2	79.8	U	75.1	U	119	U
Trichloroethene	79-01-6	71.1	J	75.1	U	119	U
Tetrachloroethene	127-18-4	79.8	U	75.1	U	119	U
Bromofluorobenzene (SS)	460-00-4	77	%	81	%	84	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-2	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	014.00 2-2-14 08/12/14 10:49		017.00 2-2-17 08/12/14 10:31	
Vinyl Chloride	75-01-4	93.7	U	75.0	U
trans-1,2-Dichloroethene	156-60-5	93.7	U	75.0	U
cis-1,2-Dichloroethene	156-59-2	93.7	U	75.0	U
Trichloroethene	79-01-6	40.7	J	41.3	J
Tetrachloroethene	127-18-4	93.7	U	75.0	U
Bromofluorobenzene (SS)	460-00-4	77	%	77	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-3	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	016.00 2-3-16 08/12/14 10:13		017.00 2-3-17 08/12/14 09:55		018.00 2-3-18 08/12/14 09:37	
Vinyl Chloride	75-01-4	89.1	U	77.1	U	90.1	U
trans-1,2-Dichloroethene	156-60-5	89.1	U	77.1	U	90.1	U
cis-1,2-Dichloroethene	156-59-2	89.1	U	77.1	U	90.1	U
Trichloroethene	79-01-6	89.1	U	107		264	
Tetrachloroethene	127-18-4	89.1	U	77.1	U	90.1	U
Bromofluorobenzene (SS)	460-00-4	74	%	83	%	80	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-4	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	016.00 2-4-16 08/11/14 17:47		017.00 2-4-17 08/11/14 17:29		018.00 2-4-18 08/11/14 17:11	
Vinyl Chloride	75-01-4	96.2	U	0.00	U	79.5	U
trans-1,2-Dichloroethene	156-60-5	96.2	U	0.00	U	79.5	U
cis-1,2-Dichloroethene	156-59-2	96.2	U	0.00	U	79.5	U
Trichloroethene	79-01-6	96.2	U	134		229	
Tetrachloroethene	127-18-4	96.2	U	58.0	J	79.5	U
Bromofluorobenzene (SS)	460-00-4	80	%	79	%	82	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-5	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	016.00 2-5-16 08/11/14 16:35		018.00 2-5-18 08/11/14 15:58		020.00 2-5-20 08/11/14 16:53	
Vinyl Chloride	75-01-4	83.7	U	92.1	U	109	U
trans-1,2-Dichloroethene	156-60-5	83.7	U	92.1	U	109	U
cis-1,2-Dichloroethene	156-59-2	25.5	J	92.1	U	547	
Trichloroethene	79-01-6	64.9	J	75.5	J	497	
Tetrachloroethene	127-18-4	53.1	J	92.1	U	206	
Bromofluorobenzene (SS)	460-00-4	80	%	81	%	84	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/11/2014 - 08/11/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/11/2014 - 08/11/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-6	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth Sample Name Analysis Date	CAS #	017.00 2-6-17 08/11/14 16:17	 N
Vinyl Chloride	75-01-4	72.8	U
trans-1,2-Dichloroethene	156-60-5	72.8	U
cis-1,2-Dichloroethene	156-59-2	72.8	U
Trichloroethene	79-01-6	24.7	J
Tetrachloroethene	127-18-4	41.9	J
Bromofluorobenzene (SS)	460-00-4	88	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/13/2014 - 08/13/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-7	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	017.00		019.00	
Sample Name		2-7-17		2-7-19	
Analysis Date		08/13/14 14:53	N	08/13/14 15:11	N
Vinyl Chloride	75-01-4	83.2	U	92.9	U
trans-1,2-Dichloroethene	156-60-5	83.2	U	92.9	U
cis-1,2-Dichloroethene	156-59-2	83.2	U	63.6	J
Trichloroethene	79-01-6	313		308	
Tetrachloroethene	127-18-4	173		178	
Bromofluorobenzene (SS)	460-00-4	75	%	75	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/15/2014 - 08/15/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/15/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	2-8	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	005.00		010.00		015.00		020.00	
Sample Name		2-8-05		2-8-10		2-8-15		2-8-20	
Analysis Date		08/15/14 14:39	N	08/15/14 14:56	N	08/15/14 15:14	N	08/15/14 15:31	N
Vinyl Chloride	75-01-4	136	U	125	U	129	U	101	U
trans-1,2-Dichloroethene	156-60-5	136	U	125	U	129	U	101	U
cis-1,2-Dichloroethene	156-59-2	136	U	125	U	129	U	101	U
Trichloroethene	79-01-6	136	U	93.9	J	129	U	1180	
Tetrachloroethene	127-18-4	136	U	219		129	U	101	U
Bromofluorobenzene (SS)	460-00-4	85	%	81	%	83	%	85	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	3-1	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	015.00 3-1-15 08/12/14 12:00		018.00 3-1-18 08/12/14 12:19	
Vinyl Chloride	75-01-4	75.4	U	76.1	U
trans-1,2-Dichloroethene	156-60-5	75.4	U	76.1	U
cis-1,2-Dichloroethene	156-59-2	75.4	U	76.1	U
Trichloroethene	79-01-6	29.8	J	163	
Tetrachloroethene	127-18-4	39.6	J	76.1	U
Bromofluorobenzene (SS)	460-00-4	84	%	82	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	3-2	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	016.00		019.00	
Sample Name		3-2-16		3-2-19	
Analysis Date		08/12/14 12:36	N	08/12/14 12:54	N
Vinyl Chloride	75-01-4	72.3	U	72.6	U
trans-1,2-Dichloroethene	156-60-5	72.3	U	72.6	U
cis-1,2-Dichloroethene	156-59-2	72.3	U	72.6	U
Trichloroethene	79-01-6	64.7	J	499	
Tetrachloroethene	127-18-4	71.2	J	72.6	U
Bromofluorobenzene (SS)	460-00-4	78	%	76	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	3-3	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	016.00		019.00	
Sample Name		3-3-16		3-3-19	
Analysis Date		08/12/14 13:12	N	08/12/14 13:30	N
Vinyl Chloride	75-01-4	79.0	U	72.5	U
trans-1,2-Dichloroethene	156-60-5	79.0	U	72.5	U
cis-1,2-Dichloroethene	156-59-2	79.0	U	72.5	U
Trichloroethene	79-01-6	22.5	J	72.5	U
Tetrachloroethene	127-18-4	79.0	U	72.5	U
Bromofluorobenzene (SS)	460-00-4	78	%	81	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	3-4	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	016.00 3-4-16 08/12/14 13:48		019.00 3-4-19 08/12/14 14:06	
Vinyl Chloride	75-01-4	64.1	U	151	U
trans-1,2-Dichloroethene	156-60-5	64.1	U	151	U
cis-1,2-Dichloroethene	156-59-2	64.1	U	151	U
Trichloroethene	79-01-6	128		1500	
Tetrachloroethene	127-18-4	136		151	U
Bromofluorobenzene (SS)	460-00-4	77	%	71	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	3-6	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	014.00		018.00	
Sample Name		3-6-14		3-6-18	
Analysis Date		08/12/14 15:16	N	08/12/14 15:34	N
Vinyl Chloride	75-01-4	70.6	U	78.1	U
trans-1,2-Dichloroethene	156-60-5	70.6	U	78.1	U
cis-1,2-Dichloroethene	156-59-2	70.6	U	78.1	U
Trichloroethene	79-01-6	375		1710	
Tetrachloroethene	127-18-4	179		78.1	U
Bromofluorobenzene (SS)	460-00-4	78	%	80	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/13/2014 - 08/13/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	3-7	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	011.00 3-7-11 08/13/14 15:29		014.00 3-7-14 08/13/14 15:47		019.00 3-7-19 08/13/14 16:04	
Vinyl Chloride	75-01-4	98.8	U	70.1	U	69.2	U
trans-1,2-Dichloroethene	156-60-5	98.8	U	70.1	U	69.2	U
cis-1,2-Dichloroethene	156-59-2	98.8	U	70.1	U	69.2	U
Trichloroethene	79-01-6	38.0	J	933		326	
Tetrachloroethene	127-18-4	151		720		69.2	U
Bromofluorobenzene (SS)	460-00-4	74	%	68	%	73	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	4-1	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	014.00		018.00	
Sample Name		4-1-14		4-1-18	
Analysis Date		08/13/14 12:12	N	08/13/14 12:29	N
Vinyl Chloride	75-01-4	74.9	U	77.9	U
trans-1,2-Dichloroethene	156-60-5	74.9	U	77.9	U
cis-1,2-Dichloroethene	156-59-2	74.9	U	77.9	U
Trichloroethene	79-01-6	74.9	U	554	
Tetrachloroethene	127-18-4	74.9	U	158	
Bromofluorobenzene (SS)	460-00-4	73	%	78	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	4-2	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	016.00		018.00	
Sample Name		4-2-16		4-2-18	
Analysis Date		08/13/14 11:36	N	08/13/14 11:54	N
Vinyl Chloride	75-01-4	79.9	U	76.3	U
trans-1,2-Dichloroethene	156-60-5	79.9	U	76.3	U
cis-1,2-Dichloroethene	156-59-2	79.9	U	76.3	U
Trichloroethene	79-01-6	22.8	J	536	
Tetrachloroethene	127-18-4	79.9	U	76.3	U
Bromofluorobenzene (SS)	460-00-4	77	%	74	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	4-3	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	015.00		018.00	
Sample Name		4-3-15		4-3-18	
Analysis Date		08/13/14 11:00	N	08/13/14 11:18	N
Vinyl Chloride	75-01-4	64.7	U	76.1	U
trans-1,2-Dichloroethene	156-60-5	64.7	U	76.1	U
cis-1,2-Dichloroethene	156-59-2	64.7	U	76.1	U
Trichloroethene	79-01-6	47.2	J	392	
Tetrachloroethene	127-18-4	52.4	J	318	
Bromofluorobenzene (SS)	460-00-4	79	%	88	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/15/2014 - 08/15/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/15/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW & Soils	**Results Given as:**	ug/L Waters, ug/kg Soils as received wet weight
Location ID:	4-4	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		013.50		015.00		017.00		018.00	
Sample Name		4-4 (10-13)		4-4 (13.5-16.5)		4-4-15		4-4 (17-20)		4-4-18	
Analysis Date		08/15/14 11:30	N	08/15/14 11:12	N	08/12/14 17:45	N	08/15/14 11:47	N	08/12/14 18:02	N
Vinyl Chloride	75-01-4	2.00	U	2.00	U	70.9	U	2.00	U	74.2	U
trans-1,2-Dichloroethene	156-60-5	2.00	U	2.00	U	70.9	U	2.00	U	74.2	U
cis-1,2-Dichloroethene	156-59-2	2.00	U	2.00	U	70.9	U	2.00	U	74.2	U
Trichloroethene	79-01-6	37.5		47.2		42.9	J	6.91		3430	
Tetrachloroethene	127-18-4	30.9		23.7		81.1		2.00	U	70.5	J
Bromofluorobenzene (SS)	460-00-4	84	%	84	%	78	%	86	%	75	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	4-5	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	016.00		020.00	
Sample Name		4-5-16		4-5-20	
Analysis Date		08/12/14 17:09	N	08/12/14 17:27	N
Vinyl Chloride	75-01-4	71.8	U	66.1	U
trans-1,2-Dichloroethene	156-60-5	71.8	U	66.1	U
cis-1,2-Dichloroethene	156-59-2	71.8	U	66.1	U
Trichloroethene	79-01-6	110		66.1	U
Tetrachloroethene	127-18-4	129		66.1	U
Bromofluorobenzene (SS)	460-00-4	76	%	76	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/12/2014 - 08/12/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	4-6	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	014.00		019.00	
Sample Name		4-6-14		4-6-19	
Analysis Date		08/12/14 15:51	N	08/12/14 16:09	N
Vinyl Chloride	75-01-4	76.6	U	67.5	U
trans-1,2-Dichloroethene	156-60-5	76.6	U	67.5	U
cis-1,2-Dichloroethene	156-59-2	76.6	U	67.5	U
Trichloroethene	79-01-6	257		18.9	J
Tetrachloroethene	127-18-4	323		67.5	U
Bromofluorobenzene (SS)	460-00-4	71	%	78	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/14/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	5-0	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	005.00		010.00		013.00		020.00	
Sample Name		5-0-05		5-0-10		5-0-13		5-0-20	
Analysis Date		08/14/14 20:24	N	08/14/14 20:41	N	08/14/14 20:59	N	08/14/14 21:16	N
Vinyl Chloride	75-01-4	76.6	U	84.5	U	86.8	U	79.4	U
trans-1,2-Dichloroethene	156-60-5	76.6	U	84.5	U	86.8	U	79.4	U
cis-1,2-Dichloroethene	156-59-2	76.6	U	84.5	U	86.8	U	79.4	U
Trichloroethene	79-01-6	76.6	U	98.0		62.9	J	1790	
Tetrachloroethene	127-18-4	76.6	U	267		82.9	J	235	
Bromofluorobenzene (SS)	460-00-4	76	%	83	%	78	%	84	%

U= Not detected above specified RL
J= Estimated value
Q= Associated with QC failure
E= Estimated value, marginally above calibration level
D= Analyzed at dilution
N= Normal sample
EB= Equip. Blank
B= Blank contam.

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	5-1	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	014.00		019.00	
Sample Name		5-1-14		5-1-19	
Analysis Date		08/13/14 12:47	N	08/13/14 13:05	N
Vinyl Chloride	75-01-4	69.0	U	74.9	U
trans-1,2-Dichloroethene	156-60-5	69.0	U	74.9	U
cis-1,2-Dichloroethene	156-59-2	69.0	U	74.9	U
Trichloroethene	79-01-6	6020		74.9	U
Tetrachloroethene	127-18-4	101		74.9	U
Bromofluorobenzene (SS)	460-00-4	73	%	73	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/12/2014 - 08/12/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/13/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	5-2	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	014.00		019.00	
Sample Name		5-2-14		5-2-19	
Analysis Date		08/13/14 13:23	N	08/13/14 13:41	N
Vinyl Chloride	75-01-4	66.8	U	80.1	U
trans-1,2-Dichloroethene	156-60-5	66.8	U	80.1	U
cis-1,2-Dichloroethene	156-59-2	66.8	U	80.1	U
Trichloroethene	79-01-6	3120		25.2	J
Tetrachloroethene	127-18-4	437		42.8	J
Bromofluorobenzene (SS)	460-00-4	85	%	76	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/15/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW	**Results Given as:**	ug/L as received wet weight
Location ID:	5-3	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth	CAS #	010.00		013.50		014.00		017.00		018.00		019.00	
Sample Name		5-3 (10-13)		5-3 (13.5-16.5)		5-3-14		5-3 (17-19)		5-3-18		5-3-19	
Analysis Date		08/15/14 00:26	N	08/15/14 00:43	N	08/13/14 13:59	N	08/15/14 01:00	N	08/13/14 14:17	N	08/13/14 14:35	N
Vinyl Chloride	75-01-4	2.00	U	2.00	U	87.0	U	2.00	U	77.6	U	89.5	U
trans-1,2-Dichloroethene	156-60-5	2.00	U	2.00	U	87.0	U	2.00	U	77.6	U	89.5	U
cis-1,2-Dichloroethene	156-59-2	2.00	U	2.00	U	87.0	U	2.00	U	77.6	U	89.5	U
Trichloroethene	79-01-6	4.34		26.6		8470		28.6		29.1	J	53.2	J
Tetrachloroethene	127-18-4	5.71		15.4		99.6		17.5		81.9		104	
Bromofluorobenzene (SS)	460-00-4	73	%	84	%	73	%	80	%	79	%	78	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/13/2014 - 08/13/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	5-4	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	014.00 5-4-14 08/13/14 20:40		018.00 5-4-18 08/14/14 10:51		020.00 5-4-20 08/14/14 11:09	
Vinyl Chloride	75-01-4	88.9	U	83.3	U	78.9	U
trans-1,2-Dichloroethene	156-60-5	88.9	U	83.3	U	78.9	U
cis-1,2-Dichloroethene	156-59-2	88.9	U	83.3	U	78.9	U
Trichloroethene	79-01-6	29.8	J	83.3	U	583	
Tetrachloroethene	127-18-4	75.1	J	83.3	U	237	
Bromofluorobenzene (SS)	460-00-4	75	%	79	%	79	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/13/2014 - 08/13/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/13/2014 - 08/14/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	Soil	**Results Given as:**	ug/kg as received wet weight
Location ID:	5-5	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	009.00 5-5-09 08/13/14 21:32		013.00 5-5-13 08/13/14 21:49		018.00 5-5-18 08/14/14 11:26	
Vinyl Chloride	75-01-4	90.6	U	78.7	U	75.9	U
trans-1,2-Dichloroethene	156-60-5	90.6	U	78.7	U	75.9	U
cis-1,2-Dichloroethene	156-59-2	90.6	U	78.7	U	75.9	U
Trichloroethene	79-01-6	90.6	U	78.7	U	602	
Tetrachloroethene	127-18-4	90.6	U	78.7	U	58.1	J
Bromofluorobenzene (SS)	460-00-4	72	%	75	%	78	%

Stone Environmental Laboratory Results

Laboratory Unit:	ML2		
Client:	Parsons	**Report Date:**	8/22/2014
Location:	Rome, NY	**Date(s) Sampled:**	08/14/2014 - 08/14/2014
Project ID:	Parsons GAFB	**Date(s) Analyzed:**	08/15/2014 - 08/15/2014
SEI Project No.:	14-152	**Test Method:**	8260C
Matrix:	GW	**Results Given as:**	ug/L as dry weight
Location ID:	MH	**Prep Method:**	Soils (SW), EPA 5035A0H/ASTM D62520-00 Ground Waters (NPW), ASTM D6520-00

All of the tests results were performed in accordance with the NELAP standards and meet all NELAP requirements for parameters for which accreditation is required or available. The reports were completed according to contract specific reporting requirements. Any exceptions to the NELAP standard requirements are noted and the data has been qualified accordingly.

Depth / Sample Name / Analysis Date	CAS #	000.01 MH-2 08/15/14 01:18	
Vinyl Chloride	75-01-4	2.00	U
trans-1,2-Dichloroethene	156-60-5	2.00	U
cis-1,2-Dichloroethene	156-59-2	2.00	U
Trichloroethene	79-01-6	3.74	
Tetrachloroethene	127-18-4	4.60	
Bromofluorobenzene (SS)	460-00-4	76	%

APPENDIX C

DAILY FIELD REPORTS

DAILY FIELD REPORT

JOB NAME	GAFB OBGW	DATE	July 12, 2014
CONTRACT	W912DQ-06-D-0012	REPORT NO.	LF-6- DFR-071214
PROJECT	Former Griffiss Air Force Base	WEATHER	Sunny, warm, 80s
JOB #	746809	TEMPERATURE	AM 70 / PM 80
CLIENT	AFRPA/USACE	TIME/HRS	0800-1100

PERSONNEL ONSITE

Dale Dolph	Parsons – Site Manager
Mark Mondak	Parsons
John Lanier	Parsons PM

EQUIPMENT ON SITE

Hertz F-150 P/U
Smoke Testing Equipment

MATERIALS DELIVERED TO/OR REMOVED FROM THE SITE

None

WORK IN PROGRESS OR COMPLETE:

1) Parsons team conducted a smoke test of the 1.5-inch sump discharge line from the sump located in the center south portion of B817. The sump line transitions to a 4-inch line as it goes away from the sump. Sewer testing smoke candles were lit and inserted into the pipe and a blower applied to the discharge pipe. Smoke candles were applied three times over an hour's time. Smoke was observed coming from three floor drains within the building (front OH door and two former rest rooms). Where the smoke was anticipated to be observed was the B816 lift station where the sump was expected to drain to. There was no evidence that the sump drain goes to this location. Smoke was not observed coming from the ground or any other location outside B817. The results of the smoke test were inconclusive.

VERBAL DISCUSSIONS/INSTRUCTIONS:

1) DRD contacted Griffiss Flightline Security and notified them that the smoke test would be performed.

H&S ISSUES:

1) AHA for "Smoke Testing" covered with crew prior to testing activities.
2) PID readings collected inside sump area and pipe to be tested. All readings 0.0 PPM.

ACCIDENTS REPORTED TODAY: **0**
NEAR MISSES REPORTED TODAY: **0**

DEFICIENCIES/CORRECTIVE ACTIONS

1) None.

ATTACHMENTS

1) Photo of B817 sump and line breach.
2) Photo of B817 smoke from floor drain east of sump.

PARSONS REPRESENTATIVE

DAILY FIELD REPORT

PHOTO LOG

View of B817 sump and line breach to facilitate smoke test.

View of B817 smoke test smoke coming from floor drain to east of sump pit room.

DAILY FIELD REPORT

JOB NAME	Building 817	DATE	8-11-14
CONTRACT		REPORT NO.	DFR 81114
PROJECT	Former Griffiss Air Force Base	WEATHER	SUNNY
JOB #	746809	TEMPERATURE	84
CLIENT	AFRPA/USACE	TIME/HRS	0730 -

H&S Topic: _____

PERSONNEL ONSITE

Name	Company	Purpose On-site
John Lemier	Parsons	PROJECT MANAGER
Allison Jordan	Parsons	SSO and GEOLOGIST
Mike Rossi	Stone	Main STONE CHEMISTRY
Ian Bowen	USACE	QA/QC GEO CHEMISTRY

EQUIPMENT USED ONSITE

Equipment	Model/Type	Quantity	Work Force/Trade	Quantity
GEO PROBE	7822 DT	1	2	1
GENERATOR	SUNSET	1	0	1
MOBILE LAB	STONE	1	1	1

MATERIALS DELIVERED TO/OR REMOVED FROM THE SITE

Material Removed/Delivered	Quantity	Source	Unit
NA			

DEFICIENCIES/CORRECTIVE ACTIONS

Description of Deficiency	Corrective Action

Work in progress or complete: TRANSECT 1 6 BORINGS COMPLETE 10 SAMPLES
TRANSECT 2 4 BORINGS COMPLETE 10 Samples

Verbal Discussions/Instructions:

ACCIDENTS REPORTED TODAY: 0
NEAR MISSES REPORTED TODAY: 0

J Lemier
PARSONS REPRESENTATIVE

DAILY FIELD REPORT
PHOTO LOG


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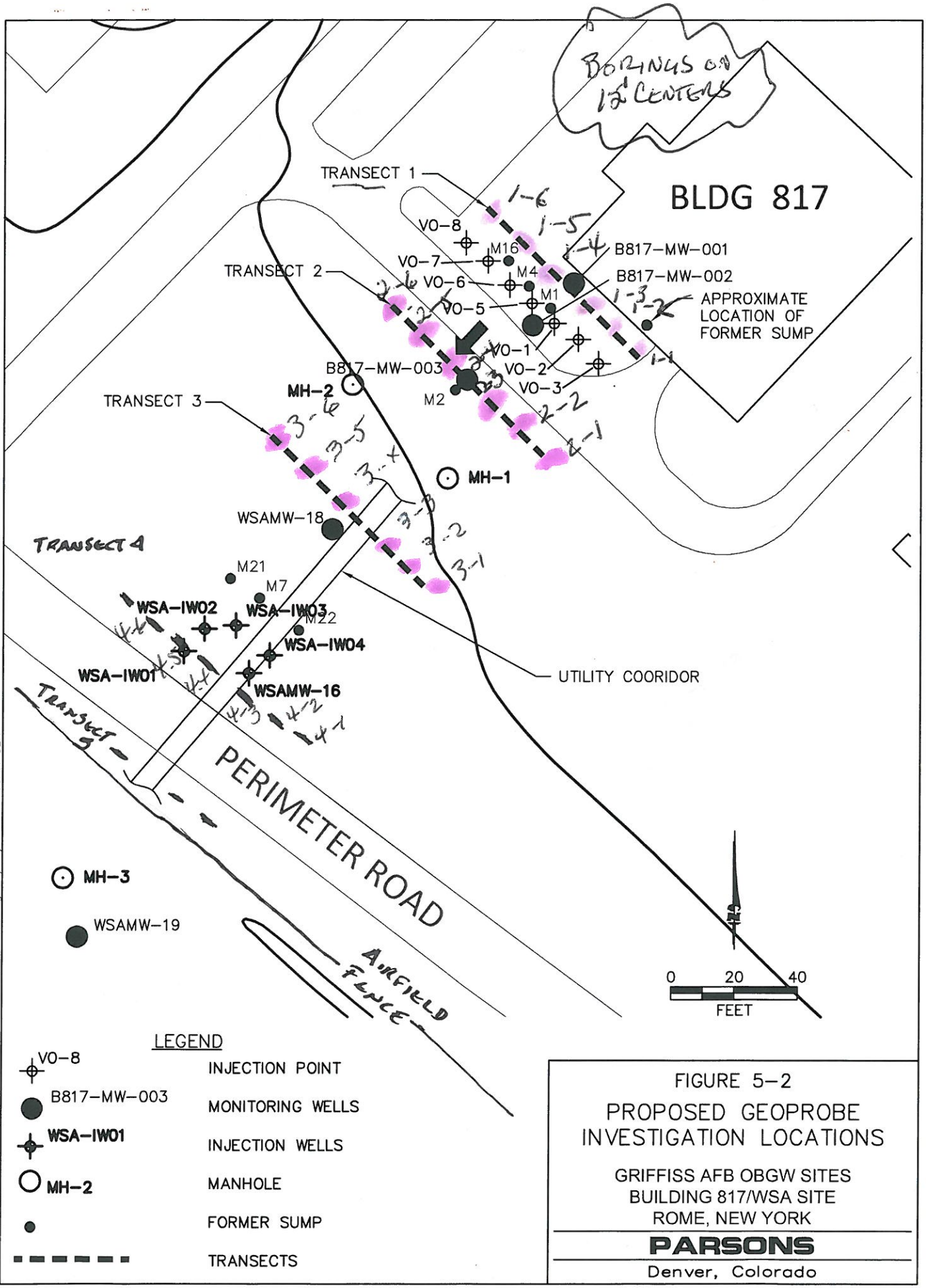


FIGURE 5-2

PROPOSED GEOPROBE INVESTIGATION LOCATIONS

GRIFFISS AFB OBGW SITES
BUILDING 817/WSA SITE
ROME, NEW YORK

PARSONS

Denver, Colorado

S:\ES\cad\...\6809\DWG\Fig_5_2_B817_06-05-14_recover.dwg 06/09/2014 11:00AM SEH

MOBILIZATION/DEMOBILIZATION CHECKLIST

Project Name/Number: Griffiss AFB Building 817, PN 746809

Site: Building 817

Mobilization complete one time at the beginning of the project. Demobilization complete one time at the end of the project. Answer each question by checking the appropriate column (yes, no, or N/A). If a No *is checked, provide explanation on the Noncompliance and Corrective Actions form.*

	Site Access and Security	Yes	No	N/A
1.	Has a copy of the Right of Entry Permit(s) been received?	☑	☐	☐
2.	Are the time frames on the Right of Entry Permits adequate for the entire job including IDW disposal?	☑	☐	☐
	Permits and Licenses			
3.	Are all subcontractors licensed to operate in the state?	☑	☐	☐
4.	Are license numbers of subcontractors recorded in the project files?	☑	☐	☐
5.	Have subcontractors provided proof of insurance?	☑	☐	☐
6.	Have variances been obtained from the state?	☐	☐	☑

If yes, provide a list of variances obtained: _____

	Coordination with Property Owners and Tenants			
7.	Has the property owner been contacted?	☑	☐	☐
8.	Did the property owner designate a contractor staging area?	☑	☐	☐
9.	Did the property owner approve a source for water?	☐	☐	☑

MOBILIZATION/DEMOBILIZATION CHECKLIST

Coordination with Environmental Authorities

10. Has the State approved the RAWP Addendum?	☐	☐	☑
11. Has USEPA approved the RAWP Addendum?	☐	☐	☑

Safety Planning and Equipment

12. Have all personnel read and signed the APP/SSHP?	☑	☐	☐
13. Was the local hospital contacted to verify the phone number and address?	☑	☐	☐
14. Are all training certificates current?	☐	☐	☐
15. Are all MSDSs in a file on-site?	☑	☐	☐
16. Are all required instruments reserved and complete with calibration standards and manuals?	☑	☐	☐
17. Do the instruments meet manufacturer maintenance and calibration standards?	☑	☐	☐

Logistical Planning

Complete within 1 week of notice to proceed.

18. Has the APP/SSHP been approved by Health and Safety Services?	☑	☐	☐
19. Has notice to proceed from the USACE been received?	☑	☐	☐
20. Are the project personnel available and scheduled?	☑	☐	☐
21. Has USACE been notified of schedule?	☑	☐	☐

Environmental Site Protection

22. Is work area limited to prevent property damage?	☑	☐	☐
23. Is IDW area greater than 100 feet away from a major stream, tributary, or drinking water well?	☑	☐	☐
24. If field activities damage property, will measures be taken to restore the Site (explain below)?	☐	☐	☐

_____

_____

_____

MOBILIZATION/DEMOBILIZATION CHECKLIST

Demobilization

25. Was the site returned, as much as possible, to its original condition?	☐	☐	☐
26. Was each work area policed for trash?	☐	☐	☐
27. Did the site point of contact inspect the site?	☐	☐	☐
28. Was the integrity of each drum of IDW inspected?	☐	☐	☐

The Parsons Representative shall sign this checklist upon completion of all items on the checklist.

Parsons Representative Signature: _____

Printed Name and Title: _____

Date: _____

FORMER GRIFFISS AIR FORCE BASE
OBGW BUILDING 817
DAILY SIGN-IN SHEET

DATE	NAME (Print)	SIGNATURE	COMPANY	PHONE NUMBER	TIME IN	TIME OUT
	JEE PROJ ORIENTATION SIGN-IN					
8-11-14	Ian Bowen		U.S.A.C.E	316 841 4649	1500	1730

DAILY SAFETY MEETING SIGN-IN SHEET

Safety Meeting Presenter: JOHN LANIGAN Date: 8-11-14

Current Weather Conditions:

Temperature (°F) = 87 Wind Direction = _____ Wind Speed = 10

Clear - (Sunny) - Cloudy – Rain - Snow Forecast = Dry

Current Site Conditions (circle as appropriate): Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No Yes - explain below:
NA

2. Safe and/or At-Risk Observations from Previous Day Activities: NA

3. Activities Taking Place Today: GEOPROBE OPS, SAMPLING, LAB OPS

3. Anticipated Hazards: Insects (ticks), heat

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: water, breaks, insect repellent

5. Additional Safety Topic or Comments: Reviewed APP, Chemistry of site hazards

HEALTH AND SAFETY CHECKLIST (Fill out Daily)

Project Name/Number: Building 817, PN 746809 **Site:** Griffiss AFB **Date:** **Personnel Observed and Locations:** _____

Complete weekly for each site. Answer each question by checking the appropriate column (yes, no, or N/A). If a No *is checked, provide an explanation on the Noncompliance and Corrective Actions form.*

Documentation	**Yes**	**No**	**N/A**
1. Is the APP/SSHP on-site?	☑	☐	☐
2. Has the APP/SSHP been reviewed, dated, and signed within the last year?	☑	☐	☐
3. Are the tasks being completed reflected in the hazard task analysis?	☑	☐	☐
4. Is there a written acknowledgement that all employees, including subcontractors have been briefed and read the APP/SSHP?	☑	☐	☐
5. Are the following training records current and available in the field:			
• 40-Hour HAZWOPER/8-hour refresher for ALL employees and subcontractors?	☐	☐	☐
• 24 Hours Supervised Field Experience?	☐	☐	☐
• 8-Hour HAZWOPER Annual Refresher?	☐	☐	☐
• CPR/First Aid?	☐	☐	☐
• 8-Hour Hazardous Waste Site Supervisor, and refresher?	☐	☐	☐
• Initial Site Health and Safety Briefing?	☑	☐	☐
• Site Health and Safety Briefing for each location or site?	☑	☐	☐
6. Are emergency maps posted at the Site and maintained in vehicles?	☑	☐	☐
7. Was the route to the hospital driven prior to beginning field work?	☑	☐	☐
8. Was the hospital ER/EMS informed of the work, dates and times of field operations, and provided a map to the site?	☐	☐	☐

	Yes	**No**	**N/A**

HEALTH AND SAFETY CHECKLIST

9. Were daily safety checklists completed and fire extinguishers checked?	☑	☐	☐
10. Were applicable MSDSs at the Site?	☑	☐	☐
11. Are documents current and available that indicate employees and subcontractors are medically fit to work and wear the required personal protective equipment?	☑	☐	☐
Observations	☐	☐	☐
12. Is required personal protective equipment available and correctly used, maintained, and stored?	☑	☐	☐
13. Is the following emergency equipment located at each site:	☑	☐	☐
• Fire extinguisher?	☑	☐	☐
• Eyewash (15 minutes fresh water)?	☑	☐	☐
• Communications (walkie-talkie or phone)?	☑	☐	☐
• First aid kit?	☑	☐	☐
14. Is the buddy system in use?	☑	☐	☐
15. Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☑	☐	☐
16. Was a random employee asked if he/she know site hazard and emergency procedures?	☐	☐	☐

The Parsons Representative shall sign this checklist upon completion of all items on the checklist.

Parsons Representative Signature: _____

Printed Name and Title: John Lanier Proj Mgr

Date: 8/11/14

PROJECT ORIENTATION ATTENDANCE SHEET
TO BE COMPLETED ONE TIME AT START OF PROJECT

(FOR ALL PARSONS EMPLOYEES ON SITE)

I hereby confirm that site / task-specific health and safety training has been conducted by the site health and safety officer which included:

- Names of personnel responsible for site safety and health
- Safety, health, and other hazards at the site
- Proper use of personal protective equipment
- Work practices by which the employee can minimize risk from hazards
- Safe use of engineering controls and equipment on the site
- Acute effects of compounds at the site
- Decontamination procedures

For the following project:

Building 817	746809	Rome, New York
(Project Title)	(Project Number)	(City, State)

Name (print)	Signature	Company	Date
John Lanier		Parsons	8/11/14
Chris Aldrich		Stone	8/11/14
Matt Millard		SEI	8/11/14
Luther Larsen		SEI	8/11/14
Mark Rossi		SEI	8/11/14
Allison Jordan		Parsons	8/11/14

Maintain in Health & Safety Plan file.

(Use additional sheets if necessary)

Daily Equipment Safety Inspection Checklist

Equipment type: Geoprobe
Equipment ID: Geoprobe 7822DT
Week Ending: 8/15/14

Visual Inspection	Mon	Tue	Wed	Thu	Fri	Sat	Repairs Needed/Report to Foreman Daily
Attachments	✓						
Batteries							
Belts–Hoses*	✓						
Blade–Bucket–Drum							
Bucket–Ripper Teeth							
Cab Glass†							
Cable hooks–latches	✓						
Coolant–radiator*							
Cutting edges							
Decals–Numbers	✓						
Exhaust–Muffler	✓						
Fire Extinguisher‡	✓						
Fuel–Grease–Oil*							
Leaks							
Loose Bolts, etc.							
Mirrors†							
Paint							
Seat–arm rests							
Tinware–Guarding							
Tires–Tracks	✓						
Undercarriage							
Underguards							

Operation Test	Mon	Tue	Wed	Thu	Fri	Sat	Repairs Needed/Report to Foreman Daily
Attachments							
Brakes–Steering*							
Bucket–Positioners							
Charging System							
Controls–Linkages							
Gauges*							
Starting System							
Transmission							

Operation Test	Mon	Tue	Wed	Thu	Fri	Sat	Repairs Needed/Report to Foreman Daily
Backup Alarm							
Driver/Operator Initials							
Horn(s)							
Lights*							
Radios							

*Acceptable operating parameters can be found in the operating manual of the equipment. Compare inspection results to operators manual to ensure proper operation of the equipment.

†Cab glass must be made of safety glass and have no cracks. Mirrors must be installed and in good repair.

‡Remove fire extinguishers once per week, shake them upside down until the contents can be felt moving, and then reinstall.

Service Log 8/11/14

Day	Hours	Last Svc. Hours	Miles/other	Date/Svc. Performed
Mon		~~6/2014~~		6/2014
Tues				
Wed				
Thu				
Fri				
Sat				

Comments:

Review Signature Date

DAILY FIELD REPORT

JOB NAME	Building 817	DATE	8-12-14
CONTRACT		REPORT NO.	DFR 81214
PROJECT	Former Griffiss Air Force Base	WEATHER	RAIN / Pt Cloudy
JOB #	746809	TEMPERATURE	65
CLIENT	AFRPA/USACE	TIME/HRS	0730 - 1820

H&S Topic: _____

PERSONNEL ONSITE

Name	Company	Purpose On-site
John Lanier	Parsons	Proj Mgr
Allison Jordan	Parsons	Geologist
Ian Bowen	USACE	Geologist / Overight QA
Jim Schentz	Parsons	Hydrogeologist

EQUIPMENT USED ONSITE

Equipment	Model/Type	Quantity	Work Force/Trade	Quantity
Geoprobe	7822 DT	1	DPT MTors	2
Mobile Lab	STONE	1	CHEMIST	1
Portable Gen	Sunbelt	1	0	

MATERIALS DELIVERED TO/OR REMOVED FROM THE SITE

Material Removed/Delivered	Quantity	Source	Unit
NA			

DEFICIENCIES/CORRECTIVE ACTIONS

Description of Deficiency	Corrective Action

Work in progress or complete: Transect 2, Transect 3

Verbal Discussions/Instructions:

ACCIDENTS REPORTED TODAY: 0
NEAR MISSES REPORTED TODAY: 0

John Lanier
PARSONS REPRESENTATIVE

DAILY FIELD REPORT
PHOTO LOG


Geoprobe 7822DT
817
Genuine Geoprobe


STONE ENVIRONMENTAL INC
platform

FORMER GRIFFISS AIR FORCE BASE
OBGW BUILDING 817
DAILY SIGN-IN SHEET

DATE	NAME (Print)	SIGNATURE	COMPANY	PHONE NUMBER	TIME IN	TIME OUT
8-12-14	Ian Bowen		USACE	316 841 4649	0730	
8-12-14	Luther Larsen		Stone	802 793 0164	0730	
8-12-14	Allison Jordan		Parsons	315-414-8445	0730	
8/12/14	Matthew Millard		Stone	802-279-9502	0730	
8-12-14	Johnhamer		Parsons	716 995 3485	0730	
8-12-14	James Schuetz		Parsons	716 523 8293	1750	

SAFETY MEETING SIGN-IN SHEET

PRINTED NAME	SIGNATURE	COMPANY
Chris Aldrich	Chris Aldrich	Stone
Matt Millard	Matt Millard	Stone.
Luther Larsen	Luther Larsen	Stone
Allison Jordan	Allison Jordan	Parsons
Ian Bonds	Ian Bonds	USACE

DAILY SAFETY MEETING SIGN-IN SHEET

Safety Meeting Presenter: John Lanier Date: 8/12/14

Current Weather Conditions:

Temperature (°F) = 70 Wind Direction = S South Wind Speed = _____

Clear - Sunny – Cloudy – Rain - Snow Forecast = Rain 90%

Current Site Conditions (circle as appropriate): Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No Yes - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities:

Hornets, Snake, Trip hazards

3. Activities Taking Place Today: Geoprobe, Sampling, Lab analysis

3. Anticipated Hazards: Trips, Rain Thunder/Lightning

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards:

No special practices

5. Additional Safety Topic or Comments: Fatalities prevention, Lightning drill

DAILY FIELD REPORT

JOB NAME	Building 817	DATE	8-13-14
CONTRACT		REPORT NO.	DFR 81314
PROJECT	Former Griffiss Air Force Base	WEATHER	RAIN / CLOUDS
JOB #	746809	TEMPERATURE	76
CLIENT	AFRPA/USACE	TIME/HRS	0730 – 1730

H&S Topic: _____

PERSONNEL ONSITE

Name	Company	Purpose On-site
John Lawer	Parsons	Proj Mgr
Allison Jardeen	Parsons	Geologist
Jim Schuetz	Parsons	Hydrogeologist
Tom Bowen	USACE	Geologist / QC Oversight

EQUIPMENT USED ONSITE

Equipment	Model/Type	Quantity	Work Force/Trade	Quantity
Geoprobe	78DT	1	OPERATORS	2
Mobile Lab	STONE	1	CHEMIST	1
Portable Gen Set	Sunbelt	1	0	

MATERIALS DELIVERED TO/OR REMOVED FROM THE SITE

Material Removed/Delivered	Quantity	Source	Unit
None			

DEFICIENCIES/CORRECTIVE ACTIONS

Description of Deficiency	Corrective Action

Work in progress or complete: Transect 4 Transect 5
Health and Safety Luncheon 1200 hrs.

Verbal Discussions/Instructions: USACE Inspection

ACCIDENTS REPORTED TODAY: 0
NEAR MISSES REPORTED TODAY: 0

_____
PARSONS REPRESENTATIVE

DAILY FIELD REPORT
PHOTO LOG

FORMER GRIFFISS AIR FORCE BASE
OBGW BUILDING 817
DAILY SIGN-IN SHEET

DATE	NAME (Print)	SIGNATURE	COMPANY	PHONE NUMBER	TIME IN	TIME OUT
8/13/14	Allison Jordan	Allison Jordan	Parsons	315-414-5445	0730	0530
8/13/14	Jan Bowen		USACE	316-841-4649	0730	
8/13/14	Chris Aldrich		Stone	8023431422	0730	
8/13/14	Luther Lassen	Luther Lassen	Stone	802 793 0964	0830	
8/13/14	Matthew Mylland	Matthew Mylland	Stone	802-279-9506	0830	
8/13/14		John Lanier	Parsons	716 648 3485	0730	

SAFETY MEETING SIGN-IN SHEET

PRINTED NAME	SIGNATURE	COMPANY
Allison Jordan	Allyson Jordan	Parsons
Tan Bowen		USACE
Chris Aldrich	Chris Aldrich	Stone
Luther Larsen	Luther Larsen	Stone
Matthew Millard	Matthew Millard	Stone
John Lamar	JL	Parsons

DAILY SAFETY MEETING SIGN-IN SHEET

Safety Meeting Presenter: John Carnes Date: 8/13/2014

Current Weather Conditions:

Temperature (°F) = 65 Wind Direction = STILL Wind Speed = _____

Clear - Sunny - (Cloudy) - Rain - Snow Forecast = SCATTERED SHOWERS

Current Site Conditions (circle as appropriate): Dry - (Wet) - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: (No) Yes - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Improve traffic control,

3. Activities Taking Place Today: GEOPROBE SOIL BORINGS, WATER SAMPLES

3. Anticipated Hazards: Slip trips falls,

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards:

5. Additional Safety Topic or Comments: Hand protection

PARSONS

PHASE 2 and 3 INSPECTION CHECKLIST

Circle one: **Initial** | Follow-up

Date: 8-13-14 Job No. Griffiss AFB Project ID:

Definable Feature: Direct Push Soil sampling

Spec Section: Geoprobe Macro core MC5 SOP

Drawing(s):

Description and location of work inspected: Transect 5 Boring 4

Personnel present:	Name	Company
John Lanier		Parsons
Allison Jordan		Parsons
Chris Aldrich		Stone Environmental
Luther		Stone Environmental
Ian Bowen		USACE
Jim Schuetz		Parsons

Materials used are in compliance with contract plans and specifications: **Yes** No

Comments: Geoprobe Sampling tube, rods, inner rods were used Acetate liners were used. 40 mL vials with methanol and luring syringes

Procedures and work methods witnessed are in compliance with contract plans and specifications: **Yes** No

Comments: Crew is following SOP. Log is of appropriate detail and samples are collected correctly

Workmanship is acceptable: **Yes** No

Comments:

Note any tests, omissions, additional requirements, etc.: Samples taken for VOC Lab analysis @ 14' and 18'.

QC Representative:

Use additional sheets as necessary

DAILY FIELD REPORT

JOB NAME	Building 817	DATE	8-14-2014
CONTRACT		REPORT NO.	DFR 8142014
PROJECT	Former Griffiss Air Force Base	WEATHER	Rainy Pt Cloudy
JOB #	746809	TEMPERATURE	60
CLIENT	AFRPA/USACE	TIME/HRS	0730 - 1730

H&S Topic: _____

PERSONNEL ONSITE

Name	Company	Purpose On-site
John Lanier	Parsons	PM/Engr.
Allison Jordan	Parsons	Geologist
Ian Bowen	USACE	Geologist / QC Oversight

EQUIPMENT USED ONSITE

Equipment	Model/Type	Quantity	Work Force/Trade	Quantity
Geoprobe	7822 DT	1	OPERATORS	2
Generator	Sienbelt	1	0	
Mobile Lab	Stone	1	Chemist	1

MATERIALS DELIVERED TO/OR REMOVED FROM THE SITE

Material Removed/Delivered	Quantity	Source	Unit
NA			

DEFICIENCIES/CORRECTIVE ACTIONS

Description of Deficiency	Corrective Action

Work in progress or complete: Finish Transect 5, 1 GW Sampling

Verbal Discussions/Instructions:

ACCIDENTS REPORTED TODAY: 0

NEAR MISSES REPORTED TODAY: 0

John Lanier

PARSONS REPRESENTATIVE

DAILY FIELD REPORT
PHOTO LOG

DAILY SAFETY MEETING SIGN-IN SHEET

Safety Meeting Presenter: John Lanier Date: 8/14/2014

Current Weather Conditions:

Temperature (°F) = 60 Wind Direction = _____ Wind Speed = _____

Clear - Sunny – Cloudy – Rain - Snow Forecast = Showers

Current Site Conditions (circle as appropriate): Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No Yes - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Stake signs by the roadway, careful with placer

3. Activities Taking Place Today: Soil boring sampler, ground water sampling

3. Anticipated Hazards: Slips, bees

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Level D modified

5. Additional Safety Topic or Comments: Broken window - observe site safety rules, AHA when changing activities

SAFETY MEETING SIGN-IN SHEET

PRINTED NAME	SIGNATURE	COMPANY
Allison Jordan	Allison Jordan	Parsons
Chris Aldrich	Chris Aldrich	Stone
Matt Millard	Matthew Millard	Stone
Ian Bown		USACE
Luther Lorraine	Luther Lorraine	Stone
John Lavin	John Lavin	Parsons

FORMER GRIFFISS AIR FORCE BASE
OBGW BUILDING 817
DAILY SIGN-IN SHEET

DATE	NAME (Print)	SIGNATURE	COMPANY	PHONE NUMBER	TIME IN	TIME OUT
8/14/14	Allison Jordan	Allison Jordan	Parsons	315-414-8443	0730	
8/14/14	Chris Aldrich	Chris Aldrich	Stone	8022343422	0730	
8/14/14	Matthew Millard	Matthew Millard	Stone	8022799526	0730	
8/14/14	Fran Bonner	Fran Bonner	USACE	3168414649	0730	
8/14/14	Luther Larsen	Luther Larsen	Stone	8027930969	0730	
8/14/14	John Kosiich	John Kosiich	Parsons	716 998 3485	0730	

8-15

PARSONS

DAILY FIELD REPORT

JOB NAME	Building 817	DATE	8/15/2014
CONTRACT		REPORT NO.	DFR 81514
PROJECT	Former Griffiss Air Force Base	WEATHER	RAIN
JOB #	746809	TEMPERATURE	55 F
CLIENT	AFRPA/USACE	TIME/HRS	0730 – 1500

H&S Topic: _____

PERSONNEL ONSITE

Name	Company	Purpose On-site
John Lanier	Parsons	Proj Mgr
Allison Jordan	Parsons	Geologist
Ian Bowen	USACE	Geologist - QC Oversight

EQUIPMENT USED ONSITE

Equipment	Model/Type	Quantity	Work Force/Trade	Quantity
Geoprobe	7822 DT	1	2 Operators	
Portable Generator	Sunbelt	1	0	
Stone Mobile Lab		1	1 Chemist	

MATERIALS DELIVERED TO/OR REMOVED FROM THE SITE

Material Removed/Delivered	Quantity	Source	Unit
NA			

DEFICIENCIES/CORRECTIVE ACTIONS

Description of Deficiency	Corrective Action

Work in progress or complete: Transect 1 GW Samples, Transect 1 – B10 + GW
Work completed 1400 hrs.

Verbal Discussions/Instructions:

ACCIDENTS REPORTED TODAY: 0
NEAR MISSES REPORTED TODAY: 0

John Lanier
PARSONS REPRESENTATIVE

DAILY FIELD REPORT
PHOTO LOG

SAFETY MEETING SIGN-IN SHEET

PRINTED NAME	SIGNATURE	COMPANY
Chris Aldrich	Chris Aldrich	Stone
Luther Larsen	Luther Larsen	Stone
Allison Jordan	Allison Jordan	Parsons
Matthew Millard	Matthew Millard	Stone.
Ian Bower	Ian Bower	USACE
John Lanier	John Lanier	Parsons

FORMER GRIFFISS AIR FORCE BASE
OBGW BUILDING 817
DAILY SIGN-IN SHEET

DATE	NAME (Print)	SIGNATURE	COMPANY	PHONE NUMBER	TIME IN	TIME OUT
8/15/14	Allison Sorelson		Parsons	315-414-8415	0730	
8/15/14	Chris Aldrich		Stone	843 1422	0730	
8/15/14	Matthew Millard		Stone	802 279 9506	0730	
8/15/14	Ian Bower		USACE	316 941 4649	0730	
8/15/14	Luther Larsen		Stone	802 793 0969	0730	
8/15	John Lanier		Parsons	716 998 3485	0730	

DAILY SAFETY MEETING SIGN-IN SHEET

Safety Meeting Presenter: J. Cannon Date: 8/15/14

Current Weather Conditions:

Temperature (°F) = 55 Wind Direction = S Wind Speed = 5

Clear - Sunny - (Cloudy) – Rain - Snow Forecast = Scattered Showers

Current Site Conditions (circle as appropriate): Dry - (Wet) - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: (No) Yes - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Barrels for road barrier, slips, trips, burrowing animal holes. Cone over holes.

3. Activities Taking Place Today: Groundwater. Soil boring.

3. Anticipated Hazards: Slips Trips Fall

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Eye + Hand protections

5. Additional Safety Topic or Comments: Cell phones, Driving Wet pavements, road rage.

Daily Equipment Safety Inspection Checklist

Equipment type: Geoprobe Rig
Equipment ID: Geoprobe 7822DT
Week Ending: 5/15/14

Visual Inspection	Mon	Tue	Wed	Thu	Fri	Sat	Repairs Needed/Report to Foreman Daily
Attachments					X		
Batteries							
Belts–Hoses*					X		
Blade–Bucket–Drum							
Bucket–Ripper Teeth							
Cab Glass†							
Cable hooks–latches					X		
Coolant–radiator*							
Cutting edges							
Decals–Numbers					X		
Exhaust–Muffler					X		
Fire Extinguisher‡					X		
Fuel–Grease–Oil*					X		
Leaks							
Loose Bolts, etc.							
Mirrors†							
Paint					X		
Seat–arm rests							
Tinware–Guarding							
Tires–Tracks					X		
Undercarriage							
Underguards							

Operation Test	Mon	Tue	Wed	Thu	Fri	Sat	Repairs Needed/Report to Foreman Daily
Attachments							
Brakes–Steering*					X		
Bucket–Positioners							
Charging System							
Controls–Linkages					X		
Gauges*					X		
Starting System							
Transmission					X		

Operation Test	Mon	Tue	Wed	Thu	Fri	Sat	Repairs Needed/Report to Foreman Daily
Backup Alarm							
Driver/Operator Initials							
Horn(s)							
Lights*					X		
Radios							

*Acceptable operating parameters can be found in the operating manual of the equipment. Compare inspection results to operators manual to ensure proper operation of the equipment.

†Cab glass must be made of safety glass and have no cracks. Mirrors must be installed and in good repair.

‡Remove fire extinguishers once per week, shake them upside down until the contents can be felt moving, and then reinstall.

Service Log _____

Day	Hours	Last Svc. Hours	Miles/other	Date/Svc. Performed
Mon				
Tues				
Wed				
Thu				
Fri				June 2014
Sat				

Comments: _____

Review Signature _____ Date _____

8/15/14

HEALTH AND SAFETY CHECKLIST (Fill out Daily)

Project Name/Number: Building 817, PN 746809 **Site:** Griffiss AFB **Date:** **Personnel Observed and Locations:** _____

Complete weekly for each site. Answer each question by checking the appropriate column (yes, no, or N/A). If a No *is checked, provide an explanation on the Noncompliance and Corrective Actions form.*

Documentation	**Yes**	**No**	**N/A**
1. Is the APP/SSHP on-site?	☑	☐	☐
2. Has the APP/SSHP been reviewed, dated, and signed within the last year?	☑	☐	☐
3. Are the tasks being completed reflected in the hazard task analysis?	☑	☐	☐
4. Is there a written acknowledgement that all employees, including subcontractors have been briefed and read the APP/SSHP?	☑	☐	☐
5. Are the following training records current and available in the field:			
• 40-Hour HAZWOPER/8-hour refresher for ALL employees and subcontractors?	☐	☐	☐
• 24 Hours Supervised Field Experience?	☐	☐	☐
• 8-Hour HAZWOPER Annual Refresher?	☐	☐	☐
• CPR/First Aid?	☐	☐	☐
• 8-Hour Hazardous Waste Site Supervisor, and refresher?	☐	☐	☐
• Initial Site Health and Safety Briefing?	☐	☐	☐
• Site Health and Safety Briefing for each location or site?	☐	☐	☐
6. Are emergency maps posted at the Site and maintained in vehicles?	☑	☐	☐
7. Was the route to the hospital driven prior to beginning field work?	☑	☐	☐
8. Was the hospital ER/EMS informed of the work, dates and times of field operations, and provided a map to the site?	☐	☐	☐

	Yes	**No**	**N/A**

HEALTH AND SAFETY CHECKLIST

9. Were daily safety checklists completed and fire extinguishers checked?	☑	☐	☐
10. Were applicable MSDSs at the Site?	☑	☐	☐
11. Are documents current and available that indicate employees and subcontractors are medically fit to work and wear the required personal protective equipment?	☐	☐	☑
Observations	☑	☐	☐
12. Is required personal protective equipment available and correctly used, maintained, and stored?	☐	☐	☐
13. Is the following emergency equipment located at each site:	☑	☐	☐
• Fire extinguisher?	☑	☐	☐
• Eyewash (15 minutes fresh water)?	☑	☐	☐
• Communications (walkie-talkie or phone)?	☑	☐	☐
• First aid kit?	☑	☐	☐
14. Is the buddy system in use?	☑	☐	☐
15. Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☑	☐	☐
16. Was a random employee asked if he/she know site hazard and emergency procedures?	☑	☐	☐

The Parsons Representative shall sign this checklist upon completion of all items on the checklist.

Parsons Representative Signature: _____

Printed Name and Title: John Lanier Proj Mgr.

Date: 8/15/14

MOBILIZATION/DEMOBILIZATION CHECKLIST

Project Name/Number: Griffiss AFB Building 817, PN 746809

Site: Building 817

Mobilization complete one time at the beginning of the project. Demobilization complete one time at the end of the project. Answer each question by checking the appropriate column (yes, no, or N/A). If a No *is checked, provide explanation on the Noncompliance and Corrective Actions form.*

	Site Access and Security	**Yes**	**No**	**N/A**
1.	Has a copy of the Right of Entry Permit(s) been received?	☐	☐	☐
2.	Are the time frames on the Right of Entry Permits adequate for the entire job including IDW disposal?	☐	☐	☐
	Permits and Licenses			
3.	Are all subcontractors licensed to operate in the state?	☐	☐	☐
4.	Are license numbers of subcontractors recorded in the project files?	☐	☐	☐
5.	Have subcontractors provided proof of insurance?	☐	☐	☐
6.	Have variances been obtained from the state?	☐	☐	☐

If yes, provide a list of variances obtained: _____

_____

_____

_____

Coordination with Property Owners and Tenants

7.	Has the property owner been contacted?	☐	☐	☐
8.	Did the property owner designate a contractor staging area?	☐	☐	☐
9.	Did the property owner approve a source for water?	☐	☐	☐

~~MOBILIZATION~~/DEMOBILIZATION CHECKLIST

Coordination with Environmental Authorities

10. Has the State approved the RAWP Addendum?	☐	☐	☐
11. Has USEPA approved the RAWP Addendum?	☐	☐	☐

Safety Planning and Equipment

12. Have all personnel read and signed the APP/SSHP?	☐	☐	☐
13. Was the local hospital contacted to verify the phone number and address?	☐	☐	☐
14. Are all training certificates current?	☐	☐	☐
15. Are all MSDSs in a file on-site?	☐	☐	☐
16. Are all required instruments reserved and complete with calibration standards and manuals?	☐	☐	☐
17. Do the instruments meet manufacturer maintenance and calibration standards?	☐	☐	☐

Logistical Planning

Complete within 1 week of notice to proceed.

18. Has the APP/SSHP been approved by Health and Safety Services?	☐	☐	☐
19. Has notice to proceed from the USACE been received?	☐	☐	☐
20. Are the project personnel available and scheduled?	☐	☐	☐
21. Has USACE been notified of schedule?	☐	☐	☐

Environmental Site Protection

22. Is work area limited to prevent property damage?	☐	☐	☐
23. Is IDW area greater than 100 feet away from a major stream, tributary, or drinking water well?	☐	☐	☐
24. If field activities damage property, will measures be taken to restore the Site (explain below)?	☐	☐	☐

_____

_____

_____

~~MOBILIZATION~~/DEMOBILIZATION CHECKLIST

Demobilization

25. Was the site returned, as much as possible, to its original condition?	☑	☐	☐
26. Was each work area policed for trash?	☑	☐	☐
27. Did the site point of contact inspect the site?	☑	☐	☐
28. Was the integrity of each drum of IDW inspected?	NA	☐	☐	☐

The Parsons Representative shall sign this checklist upon completion of all items on the checklist.

Parsons Representative Signature: _____

Printed Name and Title: John Lorier Proj. Mgr.

Date: 8/15/14

PARSONS

Construction Safety and Health Inspection Checklist (Fill out weekly)

Project: 746809 **Date:** 8-15-14

Name: Griffiss IB 80 Thrust. **Time:** 10:30 AM

Any items that have been found deficient must be corrected before work or use.
This checklist includes, but is not limited to, the following:

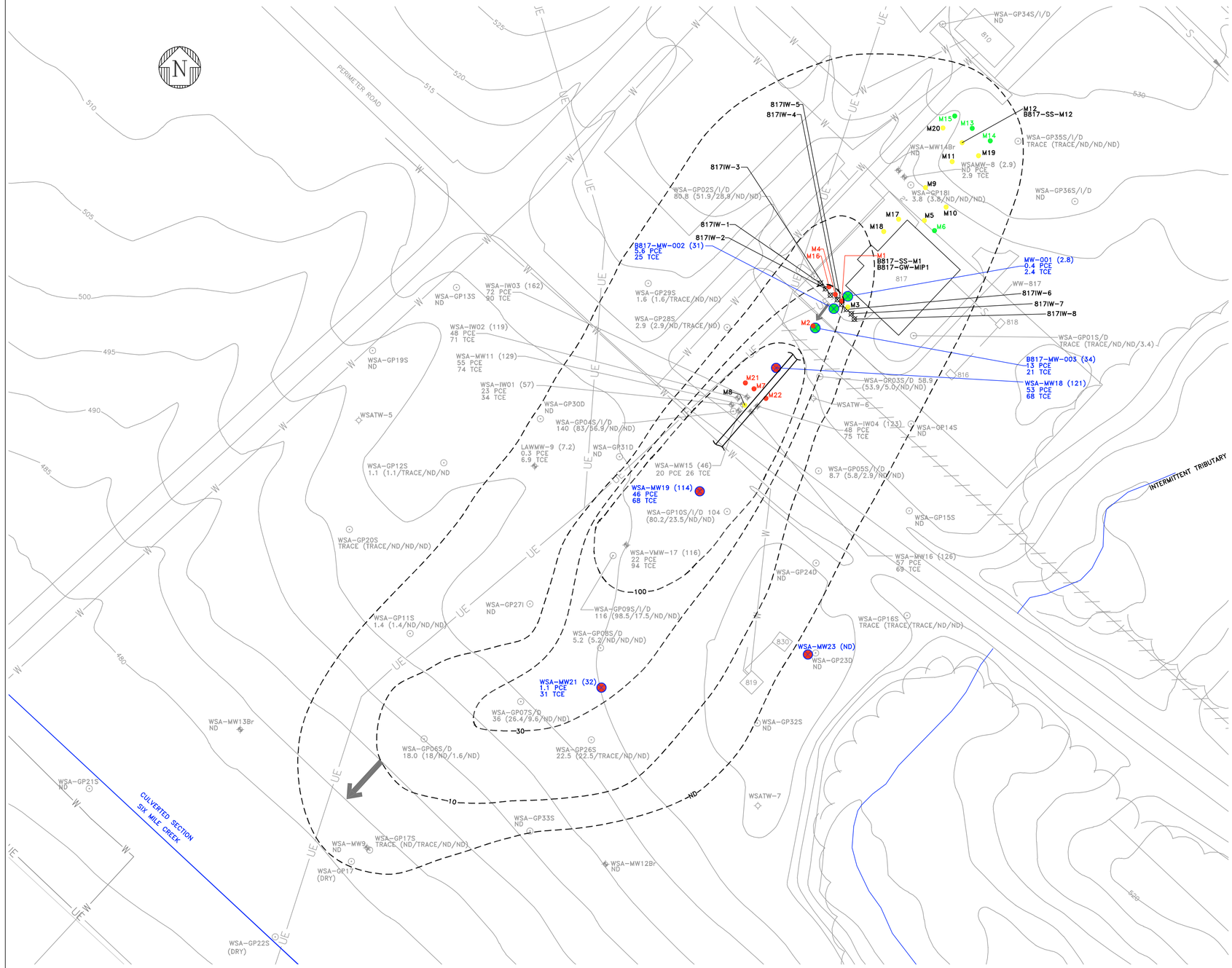
Description	Yes	No
Safe Access and Workspace	✓	
Are safe access and adequate space for movement available for:		
Emergencies	✓	
Work area	✓	
Walkways and passageways	✓	
Are ladders, stairways, and elevators properly located and functioning?		NA
Is protection provided for floor and roof openings?		NA
Is overhead protection provided for all areas of exposure?	✓	
Is lighting adequate?	✓	
Planning Work for Safety		
Are employees provided with all required protective equipment?	✓	
Have other contractors and trades been coordinated with to prevent congestion and avoid hazards?		NA
Is all temporary flooring, safety nets, and scaffolding provided where required?		NA
Utilities and Services Identification		
High-voltage lines		✓
Have all been identified by signs?		NA
Have high-voltage lines been moved or de-energized, or barriers erected to prevent employee contact?		NA
Sanitary Facilities		
Drinking water	✓	
Are toilet facilities adequate?	✓	
Work Procedures – Materials Handling		NA
Is material handling space adequate?		
Is material handling equipment adequate and proper?		
Is material handling equipment in good condition?		
Other (e.g., tunnels, excavations, shafts)		

Comments:

APPENDIX D

BUILDING 817/WSA PREDESIGN INVESTIGATION MAP

F:\Griffiss\Parsons Figures 6-2-06\Revised 6-7-06\Presentation\Oversized figs 12-27-06\PD_Fig_3-3.dwg



LEGEND

- DIRECTION OF GROUNDWATER FLOW
- FENCE
- TOPOGRAPHIC CONTOUR LINE (CONTOUR INTERVAL = 5 FT)
- UNDERGROUND ELECTRIC
- WATER LINE
- SANITARY SEWER
- OVERHEAD ELECTRIC
- ABANDONED UNDERGROUND ELECTRIC
- ND — NOT DETECTED
- TRACE — DETECTED BELOW PRACTICAL QUANTITATION LIMIT OF 1 ug/L
- TCE — TRICHLOROETHENE
- PCE — TETRACHLOROETHENE
- DCE — CIS-1,2 DICHLOROETHENE
- VC — VINYL CHLORIDE
- ECD — ELECTRON CAPTURE DETECTOR
- VOC — VOLATILE ORGANIC COMPOUNDS
- MONITORING WELL TOTAL CHLORINATED VOC GROUNDWATER DATA IN ug/L FROM 2004 AND 2006
- NEW PRE-DESIGN MONITORING WELL, SAMPLED IN OCT/NOV 2006 VALUES IN ( ) REPRESENT THE SUM OF VOCS OF CONCERN PRESENTED FOR THE WELL
- NEW PERFORMANCE MONITORING WELL, SAMPLED IN OCT/NOV 2006 VALUES IN ( ) REPRESENT THE SUM OF VOCS OF CONCERN PRESENTED FOR THE WELL
- M10 — MIP LOCATION, ELEVATED ECD DETECTION
- M11 — MIP LOCATION, MODERATE ECD DETECTION
- M23 — MIP LOCATION, LOW ECD DETECTION
- ORGANIC SUBSTRATE INJECTION POINT
- WSAMW-8 — OVERBURDEN MONITORING WELL SAMPLED IN 2004 VALUES IN ( ) REPRESENT THE SUM OF VOCS OF CONCERN PRESENTED FOR THE WELL
- WSA-MW14Br — BEDROCK MONITORING WELL SAMPLED IN 2004
- EXISTING WELL
- SUPPLEMENTAL INVESTIGATION TEMPORARY WELL LOCATION
- WSA-GP104S/I/D 140 (83/56.9/ND/ND) — YEAR 2000 GEOPROBE GROUNDWATER SAMPLING LOCATIONS WITH TOTAL OF HIGHEST CHLORINATED ETHENES IN ug/L. VALUES IN ( ) REPRESENT HIGHEST CONCENTRATION OF TCE/PCE/cis-1,2 DCE/VC, RESPECTIVELY, FROM EITHER THE SHALLOW, INTERMEDIATE, OR DEEP SAMPLE AT THE LOCATION INDICATED.
- APPROXIMATE LOCATION OF UTILITY CORRIDOR (APPROXIMATELY 7' WIDE)

NOTES
1. GROUNDWATER (GW) AND SUBSURFACE SOIL (SS) SAMPLES COLLECTED DURING MIP SURVEY IN OCTOBER 2006. SAMPLES CO-LOCATED WITH MIP POINTS SHOWN ON DRAWING.
2. GROUNDWATER PLUME CONCENTRATION CONTOURS BASED ON 2004 DATA AS PRESENTED IN THE PROJECT PROPOSAL (PARSONS 2006) AND UPDATED USING 2006 GROUNDWATER DATA COLLECTED FROM NEW PRE-DESIGN AND/OR PERFORMANCE MONITORING WELLS.
3. BASE TOPOGRAPHY AND SITE FEATURES SUPPLIED BY WOOLPERT CONSULTANTS IN 1998 AND 1999, RESPECTIVELY

60 0 60 120

SCALE: 1"=60'

GRIFFISS AFB OBGW SITES
BUILDING 817/WSA SITE
ROME, NEW YORK

Prepared by: parsons FPM group In Association with: ecology and environment engineering p.c.

DRAWING TITLE:
BUILDING 817/WSA
PREDESIGN INVESTIGATION MAP

FIGURE 3-3