

Appendix E

Phase I Investigation Field Report

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APPENDIX E

FINAL

PHASE I INVESTIGATION FIELD REPORT

Remedial Investigation
Former Camp Hero, Montauk, New York

Revision: 1

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ACRONYMS AND ABBREVIATIONS

µg/kg	microgram per kilogram
ACWS	Aircraft Control and Warning Squadron
ADR	automated data review
AGC	Army Geospatial Center
AOC	area of concern
AST	aboveground storage tank
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CERCLA	Comprehensive Environmental Restoration, Compensation, and Liability Act
CFR	Code of Federal Regulations
CP	Commissioner Policy
DER	Division of Environmental Remediation
DERP	Defense Environmental Restoration Program
DoD	Department of Defense, United States
DU	Decision Unit
ER	Engineer Regulation
ft	foot or feet
FPS	Fixed-Pulse Radar-Surveillance
FUDS	Formerly Used Defense Site
HHRA	human health risk assessment
MCL	maximum contaminant level
MEC	munitions and explosives of concern
mg/kg	milligram per kilogram
mm	millimeter
MS	matrix spike
MSD	matrix spike duplicate
NY	New York
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OPRHC	Office of Parks, Recreation, and Historic Preservation
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
ppm	parts per million
PSL	project screening level

QA	quality assurance
QC	quality control
RI	Remedial Investigation
SAP	Sampling and Analysis Plan
SIM	selected ion mass spectrometry
SLERA	screening-level ecological risk assessment
SVOC	semivolatile organic compound
TCLP	toxicity characteristic leaching procedure
TOGS	Technical & Operational Guidance Series (NYSDEC)
TSCA	Toxic Substances Control Act (1976)
UFP	Uniform Federal Policy
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
UST	underground storage tank
UXO	unexploded ordnance
VOC	volatile organic compound
WP	Work Plan

EXECUTIVE SUMMARY

AECOM-Tidewater JV is conducting a Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) Remedial Investigation (RI), Feasibility Study, Proposed Plan, and Decision Document, at Camp Hero, a formerly used defense site (FUDS). This work is being completed under contract number W912DR-13-D-0016 for the United States Army Corps of Engineers (USACE). The RI for this site is being completed in two phases, with Phase I having been completed in June 2016. This Phase I Investigation Field Report provides: (1) a documentation of the field activities, (2) details on any significant deviations from the work plan that may have occurred, and (3) all the raw data collected.

Camp Hero State Park is located on the eastern tip of the south fork of Long Island, New York (NY), approximately 5 miles east of the Village of Montauk. The former Camp Hero was established in early 1942 as a Coastal Defense Installation and the facility changed ownership within the military multiple times over the course of the following decades. Between 1974 and 1984, site lands were transferred to State, Local, and other Federal agencies, and the facility was permanently closed in 1982. The area is now used as Camp Hero State Park and is owned by the New York State Parks Commission.

Former Department of Defense (DoD) activities at Camp Hero may have resulted in contaminated material or an environmental release from these materials at certain Areas of Concern (AOCs). The RI technical approach consists of two phases of field sampling investigation (Phase I and Phase II). The primary objective of the Phase I investigation was to determine the presence or absence of contamination at the Camp Hero AOCs. The primary objectives of the Phase II investigation is to determine the nature and extent of target constituents in soil, groundwater, surface water, and sediment at the Camp Hero AOCs where the presence of contamination above applicable screening criteria is established following the Phase I investigation and to determine if there are unacceptable risks to human health and ecological health associated with exposure to related constituents.

Forty-five AOCs were identified in the RI Work Plan (WP), including former waste disposal and coal storage areas, abandoned drum locations, and former storage tanks (AECOM-Tidewater JV, 2016). Two additional AOCs were established by the USACE and the AECOM-Tidewater JV team during the Phase I investigation, for a total of forty-seven AOCs investigated during the Phase I activities. The locations are shown on site wide **Figure 1-2** and individual AOC Figures are presented as **Figures 4-2 to 4-37** (Attachment A).

Phase I investigation activities included a geospatial survey utilizing archived aerial photography, digital geophysical mapping of select AOCs, a botanical survey for the protection of rare and threatened species, field sampling, and surveying. The geospatial survey (aerial photography

archival research) of the former Camp Hero, performed by the U.S. Army Geospatial Center, evaluated Camp Hero for the potential presence of waste disposal areas which may have been utilized during DoD activities at Camp Hero. The geospatial survey was conducted as part of the June 2016 Final RI WP and results are presented in that document; however, the results are also included as Attachment E to this Phase I Investigation Field Report for reference.

The Phase I investigation was generally completed to the scope that was provided in the WP. Any deviations to the RI WP are provided in detail within this report. The most significant deviation consisted of the inability to collect groundwater samples at some of the AOCs due to a lack of groundwater from the perched aquifer. Temporary wells were installed and visited multiple times in an attempt to obtain sufficient quantities of groundwater for sample collection. This lack of available groundwater in some locations required a prioritization of analytical parameters due to the large number of sample containers required as a result of the long list of constituents that were being analyzed. Another significant deviation from the WP was at the Battery 112 AOC, which could not be investigated due to the lack of safe access. Lastly, tables which compare the analytical data to project screening levels and determinations of whether each AOC requires further investigation during Phase II are not included in the Phase I Field Investigation Report. To provide a more thorough analysis, tables and recommendations will instead be provided as part of an addendum to the RI WP that will describe the activities to be completed during the Phase II RI (referred to as the RI WP Addendum).

This Phase I Investigation Field Report describes the investigation activities and provides analytical results of the Phase I investigation. The Phase II RI sampling activities will be detailed in the WP Addendum, which will describe specific activities and sampling protocols for the Phase II RI. The RI WP Addendum will be provided to the project team for review, comments, and concurrence with recommendations.

The information and data collected during the Phase II RI will serve as the basis for a baseline Human Health Risk Assessment (HHRA) and Screening-Level Ecological Risk Assessment (SLERA). The objectives of the baseline HHRA and the SLERA are to evaluate whether concentrations of constituents from the AOCs pose unacceptable risks to human health and the environment, and to develop site-specific preliminary remediation goals, if necessary.

1.0 INTRODUCTION

Under contract to the United States Army Corps of Engineers (USACE), AECOM-Tidewater JV is conducting a Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) Remedial Investigation (RI), Feasibility Study, Proposed Plan, and Decision Document, at Camp Hero, a formerly used defense site (FUDS) under Contract Number W912DR-13-D-0016, Order Number DB01. A Camp Hero general location map is provided as **Figure 1-1** in Attachment A. The areas of concern (AOCs) at Camp Hero established in the June 2016 RI Work Plan (WP) are based on 1) the Camp Hero Feasibility Study/Hazardous Materials Survey prepared by NY State Parks contractor Cashin Associates in 1998 (hereinafter, "Cashin Report") and 2) a historical records search conducted in 2016 in preparation of this RI (AECOM, 2016). AOCs include former waste disposal areas, coal storage areas, abandoned drum locations, and former storage tanks. A site map with AOC locations is provided as **Figure 1-2** in Attachment A. The RI scope of work for this project is limited to the investigation and characterization of these sites (i.e., no remediation).

The RI technical approach consists primarily of two phases of investigation, Phase I and Phase II. The Phase I investigation was intended to confirm either the presence or the absence of suspected DoD waste at an AOC. A Phase II investigation will be conducted to define the nature and extent of the waste constituents at the AOCs where the presence of contamination above applicable screening criteria is established during the Phase I investigation. AECOM-Tidewater JV prepared this Phase I Investigation Field Report under Contract Number W912DR-13-D-0016, Order Number DB01, to provide: (1) a documentation of the field activities, (2) details on any significant deviations from the work plan that may have occurred, and (3) all the raw data collected.

1.1 Facility Background

The Camp Hero State Park Site consists of 469 acres located on the eastern tip of the South Fork of Long Island, NY, approximately 5 miles east of the Village of Montauk in Suffolk County, NY (**Figure 1-1** in Attachment A). Camp Hero State Park is split into two large subareas: the former Military Area (the Site) and the "Sanctuary Area." The Site is bounded by Montauk Highway (Route 27) to the north, the Atlantic Ocean to the south, Montauk Point State Park to the east, and Camp Hero State Park's undeveloped sanctuary area to the west.

The former military facility Camp Hero was established in early 1942 as a Coastal Defense Installation to defend the approaches to New York and was named in honor of Major General Andrew Hero. Three self-sufficient batteries (Battery 112, 113, and 216) and supporting facilities were constructed which included barracks, mess halls, hospital facilities, a motor repair shop, a recreation facility, sentry boxes, and water supply and sewage facilities. A total of 600 enlisted men and 37 officers were stationed at Camp Hero.

Camp Hero was a sub-installation of the 11th Coast Artillery Regiment (Harbor Defense) located at Fort H.G. Wright, Fischers Island, Block Island Sound, New York. Fort H.G. Wright was under the control of the Eastern Defense Command. Elements from the 11th Coast Artillery Regiment, along with elements from the 242nd Connecticut National Guard Coast Artillery Regiment (Harbor Defense), which augmented the 11th Coast Artillery Regiment at Fort H .G . Wright.

Battery 216 (identified as Bunker 216 on Figure 1-2) contained two 6-inch shielded guns, a mechanical power room, and powder room for storage of ammunition and powder charges. Battery 113 (identified as Bunker 113 on maps) consisted of two 16-inch casemated guns and battle allowances of ammunition and powder charges were stored within the battery. Battle allowances of ammunition and powder charges for the Camp Hero battery guns were stored within the individual batteries of the camp. A requirement for war reserve allowances of ammunition for the batteries also existed. However this ammunition was stored outside of Camp Hero installation boundaries at an unknown central depot location under the control of the Chief of Ordnance. Batteries 112 and 113 had a battle allowance of 200 16-inch 2,240-lb projectiles and a war reserve allowance of 300 16-inch 2,240-lb projectiles. Battery 216 had a battle allowance of 200 6-inch 90-lb HE (high explosive) rounds and 300 6-inch 105-lb AP (armor piercing) rounds and a war reserve allowance of 300 6-inch 90-lb HE rounds and 400 6-inch 105-lb AP rounds (USACE 2000).

Additionally, 37-millimeter (mm) weapons and .50-caliber antiaircraft weapon platoons were assigned to protect the Camp from air attack. The Camp's weaponry was periodically fired to practice over water but was never fired as a result of an act of hostility. It is presumed that the antiaircraft weapon ammunition for Camp Hero and nearby facilities was also stored within the battery ammunition storage facilities of Camp Hero, as no other historical or physical evidence is present to display a separate storage facility for these items. This was conceivably possible due to the storage capacity of 400 rounds of ammunition in Batteries 112 and 113, and a battle allowance requirement of only 200 rounds of ammunition (USACE 2000).

The Camp was placed on inactive status on July 31, 1947 and ultimately declared surplus by the Department of the Army on December 31, 1949. In 1949, approximately 97 acres of Former Camp Hero was transferred to the Department of the Air Force for an aircraft control and warning station. On January 24, 1951, the former Camp Hero was withdrawn from surplus and designated for use as a firing range and field exercise area for antiaircraft artillery from Fort Totten, NY. Arrangements were made for an Army cadre at the Camp and 90 mm and quad .50-caliber antiaircraft artillery began firing exercises from firing positions established in the southern bluff overlooking the Atlantic Ocean near Bunker 216. Tow target planes and radio controlled aircraft were utilized to gauge firing accuracy (later towed barges were also used). Due to limited facilities for the training units,

the units bivouacked at the Camp. Ammunition for training exercises, when required, was stored in the internal bunkers of the now unused Battery 216 (USACE 2000).

In 1952, the Air Force property was renamed the Montauk Air Force Station and was occupied by the Aircraft Control and Warning Squadron (ACWS). The Former Montauk Air Force Station portion of Former Camp Hero has been shown on Figure 1-1. Army unit training continued using 90 mm and 120 mm guns, 3.5-inch rockets, and .50 caliber guns until 1957. The facility was active until October 1958 when the ACWS was re-designated as the Radar Squadron with a new mission to provide surveillance data of air traffic in the area. In order to accomplish this mission, an advanced Specific Frequency Diversity Search Radar was built in late 1960 (Army-Navy/Fixed-Pulse Radar-Surveillance [FPS]-35 Radar Tower and Antenna).

Between 1974 and 1984, site lands were transferred to State, Local, and other Federal agencies and the ACWS facility was permanently closed in 1982. The area is currently operated by the NY State Office of Parks, Recreation, and Historic Preservation and is operating as Camp Hero State Park. The park landscape includes wooded areas, freshwater wetlands, and sea-side bluffs, complete with hiking trails and roadways leading to former military buildings, picnic areas, and recreational areas.

In 2002, the AN/FPS-35 Radar Tower and Antenna was listed under the National Register of Historic Places (NRHP). Camp Hero State Park as a whole is potentially eligible for listing on the NRHP, according to the NY State Historic Preservation Office.

1.2 Scope and Objectives

The RI technical approach consists of two phases of investigation, Phase I and Phase II. The Phase I investigation is intended to confirm either the presence or the absence of suspected CERCLA DoD waste at an AOC. A Phase II investigation will be conducted to define the nature and extent of the waste constituents at the AOCs where the presence of contamination above applicable screening criteria is established during the Phase I investigation.

This Phase I Field Report documents the Phase I RI activities at Camp Hero during May and June 2016. The objectives of this Field Report are to provide the following information:

- A summary of the Phase I RI activities at each AOC.
- Details on any significant deviations from the work plan that may have occurred.
- Raw data that was collected both in the field and from the off-site analytical laboratory.

1.3 Phase I Investigation Field Report Organization

This Field Report is organized into the following sections:

- Section 1.0: Introduction – provides an introduction to the project including the scope and objectives, installation background, and organization of this Field Report.
- Section 2.0: Technical Approach – provides the regulatory framework, description of the phased RI approach, descriptions of general field investigation operations, and information on data analysis and validation.
- Section 3.0: Background Sampling – provides the approach and results for the Camp Hero background soil sampling.
- Section 4.0: AOC Investigations – presents brief historical information, reason for concern, and the Phase I RI activities for each AOC at Camp Hero.
- Section 5.0: References – lists the references utilized in this Field Report.

The following attachments are included in this Field Report:

- Attachment A contains the figures referred to in this Field Report.
- Attachment B contains the tables referred to in this Field Report.
- Attachment C contains key correspondence with stakeholders prior to the field effort.
- Attachment D contains the Camp Hero Army Geospatial Center (AGC) Report. As part of this investigation, the Hydrologic and Environmental Analysis Branch of the Warfighter Support Directorate of the USACE ACG was tasked to search, collect, and review historical aerial photography from 1940 to 1982 searching for features associated with possible solid waste disposal areas within the former Camp Hero boundary.
- Attachment E contains the Camp Hero Geophysical Survey Report. Digital Geophysical Mapping (DGM) surveys were conducted at select AOCs in attempt to locate and identify subsurface historic infrastructure to streamline subsequent sampling activities. The Geophysical Survey Report presents the geophysical survey results and provides metal detection summary figures for each AOC investigated.
- Attachment F contains the Community Air Monitoring results. Continuous air monitoring was completed during Phase I RI activities downwind of the Geoprobe® rig during intrusive activities, in accordance with the modified generic NY State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP), Attachment 1A of the NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation.

- Attachment G contains the laboratory analytical data results, laboratory investigation-derived waste report, and the data validation reports.
- Attachment H includes contains the Daily Reports completed during Phase I RI Field work.
- Attachment I contains a Photograph Log of the Phase I RI activities and AOCs at Camp Hero.

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2.0 TECHNICAL APPROACH

2.1 Regulatory Framework

The RI work was conducted in accordance with CERCLA and the FUDS ER-200-3-1 (USACE 2004). New York State Department of Environmental Conservation (NYSDEC) is the lead regulator for this RI and will provide review and concurrence pursuant to CERCLA. The criteria established for constituents of concern in New York Codes, Rules, and Regulations (NYCRR) Subpart 375-6, "Remedial Program Soil Cleanup Objectives" will be utilized for screening criteria (NYCRR 2015a). For those areas of this project strictly addressing releases of fuels from formerly removed or used storage tanks, the following NYCRR will be applied: 6 NYCRR 613.9 (b), Closure of Tanks Permanently Out of Service (NYCRR 2015b) and NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation.

In accordance with NYSDEC policy CP-51, soil samples at suspected petroleum storage tank AOCs were analyzed for petroleum compounds by the NYSDEC Spills, Technology, and Remediation Services (STARS) list for either fuel oil or gasoline, which include volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and lead analyses (based on the suspected fuel type). Groundwater samples at suspected petroleum tank AOCs were analyzed for VOCs, SVOCs, and lead (based on the suspected fuel type). Soil and groundwater analyses at non-petroleum AOCs include a more comprehensive analytical list, depending on the concern at each AOC, which are detailed by AOC in Section 4.0.

- **Human Health Screening Criteria:** The project screening levels (PSLs) for soil are obtained from the following criteria: United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Residential Soil (USEPA 2016a), 6 NYCRR Part 375-1 Soil Cleanup Objectives (NYCRR 2015a), and NYSDEC CP-51/Soil Cleanup Guidance (NYSDEC 2010a). The PSLs for soil are the lowest of each of the criteria listed.

The PSLs for groundwater are obtained from the following criteria: USEPA Regional Screening Level for Tap Water (USEPA 2016a), USEPA MCL criteria (USEPA 2016b), NYSDEC Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (NYSDEC 2004), and New York State Department of Health Maximum Contaminant Level (MCL) criteria (NYCRR 2011).

In order to meet PSL data quality objectives, SVOCs in soil and groundwater were analyzed by Method 8270D with Selected Ion Mass Spectrometry (SIM).

- **Ecological Screening Levels:** Ecological screening level guidance and references are detailed in the RI WP. Data from the surface soil samples, as well as information from the

Phase 1 RI to assess surface water flow directions, wetlands, and ecological receptors, will be used to identify ecological data gaps to be addressed in the Phase 2 RI sampling. A summary of chemicals of potential environmental concern and the areas of concern where surface soil contamination was detected above the ecological screening criteria will be identified in the WP Addendum.

2.2 Phased Approach

The RI technical approach consists of two phases of investigation, Phase I and Phase II. The Phase I investigation was intended to confirm either the presence or the absence of suspected DoD waste constituents at an AOC. Based on Phase I findings confirming waste constituents at an AOC, a Phase II investigation will be conducted to define the nature and extent of the contamination.

- **Phase I RI:** The primary objective of the Phase I RI is to determine the presence or absence of contamination at the Camp Hero AOCs. Phase I RI activities included aerial photography archival research, digital geophysical mapping of subsurface anomalies, a botanical survey, Geoprobe® soil borings, piezometer and temporary well installations, and field sample collection. Sample collection for the Phase I investigation included surface soil [defined as soil between 0 to 1 foot (ft) bgs], subsurface soil (greater than 1 ft bgs), wipe samples of concrete and building materials, concrete chip samples, and groundwater sampling.

The purpose of this Field Report is to summarize the Phase I field activities and provide the analytical data. The original Project Work Statement scoped the Field Report to provide all the raw data collected and details on any deviations from the work plan. The RI WP mistakenly added scope to the Field Report by indicating tables would be produced and recommendations would be made regarding which AOCs will be included in the Phase II investigation. A WP Addendum will be prepared to detail the Phase II investigation approach. The RI WP Addendum will be provided to the project team for review, comments, and concurrence. A technical review meeting will be conducted with the project stakeholders to obtain consensus with the proposed Phase II investigation activities.

- **Phase II RI:** For AOCs requiring further investigation, the primary objective of the Phase II RI is to determine the nature and extent of target constituents in soil and groundwater at the Camp Hero AOCs and to determine if there are unacceptable risks to human health and ecological receptors associated with exposure to AOC-related constituents.

The Phase I RI sampling results will be used as a basis for determining the locations of Phase II samples and analyses in order to: 1) determine the nature and extent of contamination at the Camp Hero AOCs and 2) determine the concentration of a contaminant that may be contacted by a receptor at a site to conduct risk assessment. The Phase II data may include:

concrete chip samples, liquid samples from containers, surface soil (0 to 1 ft bgs), subsurface soil (greater than 1 ft bgs), surface water, sediment, and groundwater samples from temporary or permanent monitoring wells.

2.3 Coordination with Stakeholders

Project kick-off meetings were held to initiate coordination with stakeholders. Activities were coordinated with the Camp Hero State Park Superintendent, Mr. Tom Dess, to ensure activities did not impact park visitors or conflict with seasonal work restrictions. Additionally, activities were coordinated with the State Historic Preservation Officer and other interested parties and stakeholders, in accordance with Section 106 of the National Historic Preservation Act of 1996, as amended and 36 Code of Federal Regulations (CFR) 800. Attachment C of this Field Report contains key correspondence related to coordination with stakeholders.

The NYSDEC Natural Heritage and NYS Office of Parks, Recreation, and Historic Preservation (OPRHC) were consulted regarding Camp Hero RI activities, with particular focus on the botanical survey of rare and endangered species (see Section 2.4.3. below).

Coordination letters were submitted to the NYDEC Region 1 Office, the United States Fisheries and Wildlife Service (USFWS) New York Field Office, and the Shinnecock Nation regarding planned Camp Hero activities. The coordination letters indicated the USACE's intent to conduct a RI at the former Camp Hero, with the purpose of assessing if the former DoD activities may have results in adverse environmental conditions. The letters additionally explained the scope of the project and stated that care will be taken to minimize impacts to vegetation and local threatened and endangered species (see Attachment C). The NYDEC and the USFWS both indicated that they did not have any threatened or endangered species concerns for this project.

2.4 General Phase I Investigation Operations

The Phase I Investigation at Camp Hero included aerial photography archival research, digital geophysical mapping of subsurface anomalies, a botanical survey, Geoprobe® soil borings, piezometer and temporary well installations, and field sample collection. Details of each activity are provided in the sections below.

2.4.1 Aerial Photography Archival Research

As part of this investigation, the Hydrologic and Environmental Analysis Branch of the Warfighter Support Directorate of the USACE ACG was tasked to search, collect, and review historical aerial photography from 1940 to 1982 searching for site features which could be associated with solid waste disposal within the former Camp Hero boundary. Their report is included in this Field Report as Attachment D and contains a summary of potential disposal locations, along with a list of spatial data collected from 1940 to 1982 (USACE 2016). The report concluded that there was no

photographic evidence of debris accumulation suggestive of a solid waste disposal areas in the spatial data collected for this project. However, four areas were identified where solid waste disposal could have taken place, described as access points to cleared areas near or along the bluff. The four areas were designated "AGC Sites 1, 2, 3, and 4" for this RI. AGC Site 3 corresponds to the "Camp Hero State Park Bluffs" AOC, which was already established as an AOC as part of the RI investigation.

2.4.2 Digital Geophysical Mapping

Prior to the Phase I sampling activities, Digital Geophysical Mapping (DGM) surveys were conducted at select AOCs to locate and verify suspected underground storage tanks (USTs) and subsurface historic infrastructure to optimize sampling activities. DGM was conducted at the following AOCs:

- Suspected Tank A - Building 0020 - Fire Department, suspected former UST location(s)
- Suspected Tank B - Building 0022 - Kitchen/Office, suspected former UST location(s)
- Suspected Tank C - Building 0002 - Barracks, suspected former UST location(s)
- Suspected Tank D - Building 104R - Commissary, suspected former UST location(s)
- Suspected Tank E - Building 3001 - AT&T/Lilco, suspected former UST location(s)
- Suspected Tank F - Well Pump House, suspected former UST location(s), hazardous materials
- Suspected Tank G - Well Pump House, suspected former UST location(s)
- Fuel Pump House Distribution Line - distribution line from the Fuel Pump House (connected to AST-35) identified on historic drawings connecting to former Building 203
- Battery 216 - potential underground vaults, unknown use, potential storage
- Plotting Room 113 - waste area, potential storage or waste dump site

The intent of the geophysical surveys at each of the above sites was to: (a) verify the outline of a tank (if still exists), (b) identify the extent of residual subsurface features, and (c) examine the general vicinity to support safe subsurface sampling within close proximity to the structures.

The DGM field survey methods consisted of a combination of electromagnetic (EM) and magnetic (MAG) Analog Geophysical Mapping (AGM) metal detection surveys, at 5-ft increments, within the bounds of accessible areas of each pre-marked survey area. The DGM was completed using the Geonics EM61-MK2 instruments in relatively open areas, while AGM, using a Schonstedt® GA-72cd, was reserved for vegetated areas not accessible using DGM methods. After each sweep of the AOC

area, significant DGM instrument readings were relocated, marked, and annotated as to whether a surface feature coincides with the instrument reading.

Additional information is available in the Camp Hero Geophysics Report (Attachment E), which presents results and provides metal detection summary figures for each AOC investigated. Results are discussed by AOC in Section 4 of this Field Report.

2.4.3 Botanical Survey

A botanical survey for rare and threatened species at Camp Hero State Park was completed in May 2016, in conjunction with the Geophysical Surveys, prior to any vegetation removal activities. The NYSDEC Natural Heritage Program identified four rare plant species which have been historically reported within the Camp Hero RI project area, including: Little-leaf Tick-trefoil, Fringed boneset, Blunt mountain-mint, and Southern arrowwood.

Prior to the botanical survey field activities, the AECOM botanist researched the habitat requirements, phenology, critical diagnostic characteristics, and morphologically-similar congeners for the target plant species identified as potentially occurring in the vicinity of the Project survey area by the NYSDEC Natural Heritage Program. Botanical references and regional field manuals were consulted for the northeastern United States as well as Flora of North America.

During field preparation for the remedial investigation, each AOC and background soil sampling location was surveyed for the four rare plant species. If any rare plant species were identified, they were marked with red and white checkerboard flagging. The USACE and AECOM-Tidewater JV team was consulted to determine the best method to avoid destruction of any protected plants by subsequent investigative procedures, including brush clearing and use of heavy equipment.

The Camp Hero sites were surveyed by the AECOM botanist and USACE project ecologist in May 2016. Findings indicated that the upland forests consisted of a mixed hardwood canopy dominated by *Quercus* species. Also present in the canopy to a lesser degree were *Fagus grandifolia*, *Tilia americana*, *Nyssa sylvatica*, *Prunus serotina*, and *Acer rubrum*. The upland forest understory was dominated by *Hamamelis virginiana*, *Ilex opaca*, *Vaccinium corymbosum*, *Smilax rodundifolia*, and in some areas, *Viburnum dentatum* var. *venosum*. Forested wetlands were dominated by an *Acer rubrum* canopy with a *Lindera benzoin* and *Vaccinium corymbosum* understory.

Upland successional shrub lands were often dominated by *Morella pensylvanica*, *Amelanchier canadensis*, *Prunus serotina*, *Toxicodendron radicans*, *Vaccinium corymbosum*, and in some areas- *Viburnum dentatum* var. *venosum*. Many upland successional shrub land sites were also heavily infested with *Lonicera morrowii* and *Elaeagnus umbellata*.

Additionally, a few AOCs were located on anthropogenically-altered or regularly disturbed sites, including turf areas and hardscape which contained herbaceous weeds.

Regarding the four target rare plant species, the three herbaceous species, *Desmodium ciliare*, *Eupatorium torreyanum*, and *Pycnanthemum muticum*, were not encountered. It is likely that it was too early in the season for these three species to have emerged.

The fourth target rare plant species, *Viburnum dentatum* var. *venosum* (Southern arrowwood), was encountered with great frequency throughout Camp Hero; in some areas, it was co-dominant in the forested understory or upland successional shrub lands and it appears the population is stable and thriving. While all larger specimens were flagged, a small number of sites also had numerous seedlings that are almost impossible to avoid without employing extraordinary measures. In consultation with the NYSDEC Natural Heritage and NYS OPRHC, it was concluded that the destruction of a few seedlings during the course of further remedial investigation at Camp Hero would be acceptable in light of the large and stable population of *Viburnum dentatum* var. *venosum*. Copies of key correspondence with the OPRHC regarding the Southern arrowwood are included in Attachment C.

2.4.4 Field Sampling

Sample collection for the Phase I investigation included surface soil (defined as soil between 0 to 1 ft bgs), subsurface soil (greater than 1 ft bgs), concrete chip, and groundwater sampling. After sample collection and/or field screening, samples were transferred to the appropriate sample container for laboratory analysis and placed in a cooler on ice. The required sample containers, preservatives, and holding times were specified in the Uniform Federal Policy (UFP) Sampling and Analysis Plan (SAP), Attachment B to the RI WP (AECOM 2016). Sample locations were marked with a pin flag with sample identification number, photo-documented, and recorded with a hand-held global positioning system unit. The collected coordinates were utilized to produce sample location maps for this RI Field Report and are available for use in sample location mapping for future documents. The non-disposable sampling equipment (i.e., hand auger) was decontaminated between sample locations.

Surface and Near-Surface Soil: A clean (decontaminated) hand auger or disposable scoop was used to collect surface and near-surface soil samples. In some locations, the Direct Push Geoprobe® rig was used to collect a small, 5-foot core, from which the 0 to 1 foot surface soil sample was collected. As defined in the WP, surface soil samples were considered to be 0 – 1 ft bgs, where near-surface samples were considered to be 1 – 2 ft bgs. VOC samples were collected directly from the recently-exposed soil using a sampling corer (Terra Core kits). For the other analyses, the soil was removed and transferred to a disposable, re-sealable plastic bag and was

then homogenized, which consisted of mixing the soil until the sample is a uniform color, texture, and particle size. Any non-homogenous particles, organic matter, and debris were removed from the soil samples. Soil samples at pre-selected locations were field-screened with the PID while in the plastic bag prior to the homogenization of the soil. After sample collection and/or field screening, the sample was transferred to the appropriate sample container for laboratory analysis and placed in a cooler on ice.

Subsurface Soil: Subsurface soil samples were collected using a Direct Push Geoprobe® drill rig. A Geoprobe® dual-tube sampling system was used to collect continuous soil cores by advancing a 5-ft (60-inch) coring barrel fitted with the dedicated, disposable polyvinyl chloride (PVC) liners to the target depth, as established in the RI WP. Borings were either advanced to the depth of the perched water table or to 25 ft bgs, with the exception of the borings at AOC H-17, which were advanced to 35 ft bgs in an attempt to reach groundwater. Specific depths of the borings at each AOC are provided in Section 4.0.

Soil cores were screened for VOCs immediately upon opening the sleeve with a PID utilizing an 11.7 electron-Volt bulb. Screening results, lithologic descriptions, and other observations and measurements were recorded on a soil boring log by the field geologist. At a minimum, depth interval, recovery thickness, PID concentrations, moisture, relative density, color (using a Munsell soil color chart), and texture using the Unified Soil Classification System were recorded. Additional observations recorded may have included detectable odors, groundwater or perched water depth, organic material, cultural debris, or color changes indicating staining. Photographs were also taken of significant boring cores.

Two subsurface soil samples were generally be collected from each Geoprobe® location unless otherwise specified in the RI SAP. Samples were collected from depth intervals where field screening or observations (i.e., highest VOC concentration measured with the photo-ionization detector, odor, staining) indicated the potential presence of contaminants, the depth of the structure being evaluated, or at the depth of groundwater, as established in the RI WP. VOC samples were collected directly from the recently-exposed soil using a sampling corer (Terra Core kits). For the other analyses, the soil was removed and transferred to a disposable, re-sealable plastic bag and was then homogenized, which consisted of mixing the soil until the sample is a uniform color, texture, and particle size. Any non-homogenous particles, organic matter, and debris were removed from the soil samples.

Concrete Coring: Concrete coring was necessary prior to boring at locations with asphalt or cement. A 4-inch diameter core barrel was advanced through the concrete using a stand mounted core drill to

access soils for direct push sampling. Once drilling and sampling activities were finished, the core and lag holes were patched with concrete.

Groundwater Sample Collection from Temporary Wells (Grab Sample): Groundwater samples were collected from temporary wells installed during the DPT drilling activities at locations where groundwater was encountered in the borings. If groundwater was encountered at the location, a Peristaltic Geopump with disposable tubing was used to collect a grab groundwater sample. A YSI 6920® water quality meter with a multi-parameter cell was used to obtain one set of groundwater parameter readings after the grab sample was collected, if sufficient groundwater was left in the well. Water quality parameters included temperature, pH, specific conductivity, dissolved oxygen, reduction-oxidation potential, and turbidity.

Recharge in some wells was insufficient to collect the required volume for all planned analyses. Multiple attempts were made to sample these wells and the collected volume was submitted for laboratory analysis of a shortened analyte suite, if all bottleware could not be filled. If within 24 hours, groundwater recharge had not produced any water in the temporary well, no groundwater sample was collected during Phase I.

Concrete Chip Samples: The surface of the sample location was broken up using a rotary hammer drill with a decontaminated 1-inch bit. Multiple holes up to 2 centimeters (cm) in depth were created within the sampling area, in order to fill the full 8-ounce (oz) required volume. An effort was made to avoid scattering pieces out of the general sampling area. The chipped/pulverized concrete pieces and powder were collected using dedicated gloves and transferred directly into the laboratory-provided sample container.

Wipe Sampling for polychlorinated biphenyls (PCBs): Prior to sampling, the gauze pad was saturated with hexane. A 10 cm × 10 cm sample area was prepared at the sample location. The sample area was thoroughly wiped from left to right and again from top to bottom. Once the area had been wiped, the gauze pad was placed back into the sample jar and allowed to air-dry prior to sealing the jar.

Sample Identification. The sample identification numbers consisted of an alphanumeric designation related to the AOC, event, media type, and consecutive number, according to the following conventions:

AOC Identification (ID): **203** = Building **203** (see Table 2-1 for AOC IDs)

Location ID, which consists of:

Media Type: **SB** = Surface **B**oring (see Table 2-1 for Media Type Codes)

Consecutive Number: 01, 02, 03, etc.

For groundwater samples, "-GW" at the end of the location ID

For soil samples, depth of sample (in ft): 01, 02, 03 etc.

For example, the sample identification number for the first soil boring sample collected at Building 203 from 2 to 3 ft bgs was 203-SB01-03. The sample identification number for the groundwater sample collected from the same boring was 203-SB01-GW. Duplicate sample identification numbers were followed with a "DUP". MS sample identification numbers were followed with a "MS" and MSD sample identification numbers were followed with a "MSD."

Sample Handling, Storage, and Shipment: Samples were collected into laboratory-supplied bottleware and placed in a cooler on ice. Sample times, dates, and analyses were recorded on boring logs, field sample forms, and field team logbooks. Samples were then quality-control checked by the site Sample Manager and recorded on chain-of-custody (COC) records prior to being packed in coolers on fresh ice and transported daily via overnight commercial carrier to the laboratory. Original COCs were included in the coolers with their respective samples; carbon-copies of the COCs were kept on-site by the Sampler Manager and emailed to the laboratory and project chemist each night, along with tracking numbers for the shipped coolers.

Water Level Measurement: Water level measurements were collected from temporary wells prior to the collection of samples using an electric measuring tape. Additionally, three piezometers were installed in the vicinity of former Building 203 to obtain information on the direction of groundwater flow. The piezometers were constructed as standard PVC wells with filter-pack and a bentonite seal, as necessary, but were not grouted in place. No analytical samples were collected from the piezometers.

Borehole and Temporary Well Abandonment: DPT borings and temporary wells were abandoned at completion of sampling activities. The PVC pipe was removed and backfilled with sand at the locations with temporary wells, whereas borings in grass or sand were abandoned by backfilling with bentonite chips. Borings in asphalt or concrete were abandoned by backfilling with bentonite chips to approximately 6 inches bgs, and the remainder of the borehole was patched with asphalt cold patch or hydraulic concrete. The surface at each location was restored to match the surrounding area.

Temporary wells at AOCs AST-35, FPH, and former Building 203 (including the piezometers) were left in place with the permission of the USACE and NYS Parks Service. These temporary wells are located in gated areas off-limits to the public and may need to be utilized due to the discovery of free product at former Building 203.

2.4.5 Anomaly Avoidance

An Unexploded Ordnance (UXO) Probability Assessment for Intrusive Investigation at Former Camp Hero completed by USACE Baltimore District determined that the Camp Hero RI activities had a low probability of encountering munitions and explosives of concern (MEC), except for areas H and K, which would not be entered at any point during RI field activities. However, as a precautionary measure, anomaly avoidance was conducted in accordance with EM 385-1-97 by a UXO Technician II during intrusive Phase I RI activities with a hand-held magnetometer. "Anomaly avoidance" is defined as the avoidance of surface MEC and any subsurface anomalies where the specific activity can be moved to another location.

Additionally, all field personnel, including AECOM-Tidewater JV employees and subcontractors, completed Ordnance Recognition Training prior to the start of field activities.

2.4.6 Community Air Monitoring

Continuous air monitoring was completed downwind of the Geoprobe[®] rig during intrusive activities, in accordance with the modified generic NYSDOH Generic CAMP, Attachment 1A of the NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation. The CAMP establishes air monitoring activities that were to be implemented to protect the community from any potential airborne releases that could result from field activities associated with the RI or interim remedial action efforts, as necessary (NYSDEC 2010b). No exceedances were observed during Phase I RI activities. Data from Phase I RI air monitoring are included as Attachment F to this Field Report.

2.4.7 Surveying

The horizontal and vertical position of temporary well locations were surveyed to a horizontal accuracy of 0.1 ft and a vertical accuracy of 0.01 ft. However, no permanent benchmark was available near RI activities in Camp Hero State park; therefore, the vertical positions were based on an arbitrary benchmark of 80 feet at the 1st well surveyed (H17-SB01), near the Commissary Building). Surveyed locations were collected relative to an initial arbitrary benchmark with the following exceptions: Building F100C (UST 34) locations F100C-SB01 and F100C-SB02 and Waste Disposal System locations WDS-SB01, WDS-SB02, and WDS-SB03. The vertical position of temporary wells at these AOCs were surveyed relative to the other temporary wells within the AOC. The temporary wells at these two AOCs were not surveyed relative to the Phase I arbitrary benchmark (H17-SB01) due to their "remote" location relative to the other AOCs. The vertical positions of the temporary well locations and depth to groundwater data were utilized to estimate the direction of groundwater flow at each AOC. A surveyed benchmark with known elevation will be acquired by licensed surveyors during permanent monitoring well installation as part of the Phase II investigation.

2.4.8 Investigation-Derived Waste (IDW) Management:

AECOM-Tidewater JV managed IDW generated during the Phase I field activities pursuant to applicable Federal, State, and local regulations and guidance, including the USEPA Management of Investigation-Derived Wastes during Site Inspections (USEPA 1992), USACE guidance (2013), and NYSDEC Technical Guidance for Site Investigation and Remediation (2010b).

In accordance with NYSDEC Technical Guidance for Site Investigation and Remediation (2010b), soil cuttings and purged groundwater were disposed at the site within the corresponding borehole to within 24 inches of the ground surface with the remainder of the borehole filled with bentonite. An exception to this was when volatile organic field screening instruments detected measurements from soil or groundwater that were above background or visual discoloration of soil or olfactory evidence of contamination were noted. In general, minimal groundwater IDW was generated as most of the purged groundwater was utilized for analytical samples.

IDW was stored in 55-gal drums, which were properly labeled indicating the generator, contact information, contents, and date of generation. The drums were stored at the Camp Hero State Park Motor Pool building, with the permission of State Park Superintendent Mr. Tom Dess. Analytical samples of both the soil and liquid IDW were collected on 20 September 2016 and submitted to RTI Laboratories for hazardous waste determination, including Toxicity Characteristic Leaching Procedure (TCLP). Both soil and liquid IDW were determined to be non-hazardous. Table 2-1 (Attachment B) presents the IDW analytical results compared to TCLP regulatory levels (40 CFR § 261, 1993). The analytical laboratory package of results from the liquid and solid IDW samples are included in Attachment G.

2.5 Quality Assurance/Quality Control Samples

Quality assurance/quality control (QA/QC) samples were collected to ensure field and laboratory protocols resulted in consistent and valid data. The following types of QA/QC samples were collected:

Field Duplicates: One additional set of sample containers were collected along with the normal sample. The duplicate was analyzed as a normal sample at the laboratory. Duplicates were collected at a frequency of one duplicate per ten samples.

Matrix Spike/Matrix Spike Duplicates (MS/MSD): Two additional sets of sample containers were collected along with the normal sample. A Matrix Spike and Spike Duplicate (MS/MSD) are representative but randomly chosen samples with known concentrations of analytes of interest added to the samples prior to sample preparation and analysis. They are processed along with the same un-spiked sample.

Equipment Blanks: One equipment blank was collected from the hammer drill used to collect the concrete chip samples. The equipment blank was collected by pouring Type II deionized water over the decontaminated drill bit and collecting the water in the appropriate sample containers.

Trip Blanks: Trip blanks for VOC analysis were provided by the laboratory. One trip blank was included in each cooler with VOC samples for VOC analysis.

2.6 Data Validation

Data validation was conducted on the Automated Data Review (ADR) output for the Phase I analytical data. All analytical data packages were validated to ensure compliance with specified analytical, QA/QC requirements, data reduction procedures, data reporting requirements, and required accuracy, precision, and completeness criteria. This includes, but is not limited to, the following:

- Sample preservation and holding times;
- Blanks (method and rinse);
- Matrix spikes and spike duplicates;
- Laboratory and field sample duplicates;
- Surrogates; and
- Laboratory control samples.

Analytical results were assessed for accuracy and precision of laboratory analysis to determine the limitations and quantity of data. The quality of the data collected in support of the sampling activity was considered acceptable.

The data validation process assigned data qualifiers to results that did not meet specified laboratory protocols but were still considered acceptable via the data validation process. Some data that required qualifiers included samples which were subject to cooler delivery issues resulting in samples arriving out of temperature, samples exceeding specified hold times, and samples requiring multiple dilutions for the SIM PAH method. Samples falling within these qualification scenarios are detailed below.

Sampling and Cooler Delivery Issues. The cooler containing sample H17-SB02-GW was received outside temperature (at 22°C) due to delayed delivery via Federal Express package delivery company. For the VOC analyte group, non-detect results were qualified "R" (rejected value) and the detects were qualified "J" (estimated value). All other analytes in the sample (SVOCs and PCBs) were qualified "J" (estimated value) for detected values and "UJ" (value under detection limit; estimated value) for non-detected values. Samples H14-SB01-GW, H14-SB03-GW, and MP-SB03-

GW were also received outside temperature due to a cooler delivery delay; however, the samples were recollected at a later date and the recollected samples were delivered to the laboratory without temperature or hold time concerns and no results required qualification.

Hold Time Issues. Several Camp Hero samples were qualified due not meeting the recommended method hold times, as detailed in Table 2-2 (Attachment B). Analyte detects were qualified "J" (estimated value) and non-detected values were qualified "UJ" (value under detection limit; estimated value) in the samples.

Multiple Dilutions for PAH SIM method. Multiple dilutions were required for some samples utilizing the SIM PAH analysis. These samples had compounds that were being reported over calibration. The laboratory had to run several dilutions to capture concentrations within the calibration range. Some of the samples had to be analyzed three times. Data from all dilutions were evaluated and compound results were reported from the lowest dilution that exhibits lack of interference.

For example, samples FPH-SB02-GW, FPH-SB03-GW, FPH-SB04-GW, and FPH-SB04-GW DUP were run for several SIM PAH dilutions, as well as regular PAH Method 8270. Due to the very high dilutions in SIM PAH, results were reported from the regular PAH Method 8270.

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3.0 BACKGROUND SAMPLING

Background soil samples were collected in Phase I to establish park-wide background levels for naturally occurring constituents and anthropogenic impacts. A total of 62 background soil samples (30 surface and 32 subsurface) were collected from four different locations (BG-01 through BG-04) representing two different soil types, Whitman Sandy loam (outwash deposits of stratified sand and gravel) and Montauk loam (glaciofluvial deposits of stratified sand and gravel in forms of kames). These two soil types represent the soil types where most of the Camp Hero RI AOCs are located, excluding urban soil complexes, which are not representative of background conditions. A soil survey map of Camp Hero is included as **Figure 3-1** (Attachment A).

Background samples were analyzed for metals and polycyclic aromatic hydrocarbons (PAHs) by method 8270D in SIM mode. PAHs were included in the background analysis because they may be ubiquitous to the environment and may be derived from non-anthropogenic and anthropogenic influences not directly related to former military activities at Camp Hero.

Phase I Background Field Operations. A total of 16 soil borings were advanced for background sampling. Eight borings were located in the Whitman Sandy Loam (4 borings at 2 locations) and eight borings were located in the located in the Montauk Loam (4 borings at 2 locations). Sample locations were spaced a minimum of 25 ft apart. Borings were advanced to 10 ft bgs or the depth of the perched aquifer, whichever was encountered first. Two subsurface soil samples were collected per boring: 4 to 5 ft bgs and 9 to 10 ft bgs or 1 to 2 ft above the depth to ground water, whichever was encountered first. One surface soil sample was collected from 0 to 1 ft from each boring. Fourteen additional surface soil samples were collected between the four background locations. All four background soil sampling locations are shown on the site map (**Figure 1-2**) and individual background location maps are provided as **Figures 3-2, 3-3, 3-4, and 3-5**, respectively (Attachment A).

Per this methodology, the sample sizes for the background soil samples are as follows:

- n = 15 for surface soil in Montauk Loam (at locations BG-02, BG-04)
- n = 15 for surface soil in Whitman Sandy Loam (at locations BG-01, BG-03)
- n = 16 for subsurface soil in Montauk Loam (at locations BG-02, BG-04)
- n = 16 for subsurface soil in Whitman Sandy Loam (at locations BG-01, BG-03)

The location and need for groundwater, sediment and surface water background data, and the methods that will be used to determine whether site concentrations are within background levels for these media, will be defined in the RI WP Addendum prior to Phase II sampling.

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4.0 AOC INVESTIGATIONS AND RESULTS

The AOCs investigated as part of the Phase I RI were a combination of sites previously identified in the 1998 Camp Hero FS (Cashin 1998) and others identified during the 2016 records review conducted in preparation of the RI, as described in the Phase I RI WP (AECOM-Tidewater JV, 2016). The locations of the AOCs are shown on the Site Map in **Figure 1-2**. Groundwater elevations across the facility are presented in **Figure 4-1**.

Analytical results from the Phase I sampling are provided in Attachment G (Laboratory Analytical Reports). Tables with analytical results compared to PSLs will be provided as part of the WP Addendum for those AOCs included in the Phase II sampling, and in the final RI Report for all AOCs. The field operations and results for the Phase I Investigation are provided for AOC in the subsections below and also documented in the Daily Reports (Attachment H). **Table 3-1** (Attachment B) provides a summary of the Phase I investigation activities and the analytical samples collected at each AOC. Photographs of the AOCs are included in the Photograph Log (Attachment I).

4.1 Battery 113

Battery 113 has historically been referred to as Bunker-1 and Battery Dunn. Battery 113 historically contained two 16-inch casemated guns and battle allowances of ammunition and powder charges were stored within the battery. Battle allowances of ammunition and powder charges for the Camp Hero battery guns were stored within the individual batteries of the camp. The Camp Hero FS (Cashin 1998) noted a cluster of tanks of various sizes and shapes inside Battery 113, the prior purpose of which is unknown. These included two cylindrical red-painted tanks suspended from the wall; three vertical tanks standing on the floor, which have heavily rusted exteriors; and what was suspected to be one or more tanks in a wooden enclosure on the floor. These tanks were thought to be part of a single system, or multiple systems, possibly including fire suppression, hydraulic fluids, emergency water supply, or emergency fuel supply. Waste drums were also noted. During the records review of archived NY State Park Service drawings of Battery 113, the two cylindrical red-painted tanks suspended from the wall are identified as 150 gallon diesel fuel tanks.

Additionally, the Cashin Report notes Battery 113 to have had oil staining under electrical equipment in the old electrical room. This location was sampled for PCBs, and results showed a PCB level of 24,200 ppb (Cashin 1998).

Phase I Field Operations: A site survey of Battery 113 was conducted during Phase I field activities to identify the presence of tanks and waste drums, assess if standing water was present in pits, and identify visual evidence of potentially PCB-contaminated stained concrete. Prior to entering the building, the team conducted demolition of the sealed entryway to Battery 113 to

create an entrance for the team, using a hammer drill and sledge hammer. Four team members entered the battery to complete the survey. Team members wore tyvek suits, rubber booties, nitrile gloves, full or half-face respirators with P100/OV cartridges, hardhats, and head lamps. The buddy system was utilized while inside the Battery and at least one team member was stationed outside the entrance of the Battery at all times.

Two sub-slab pits with standing water were observed in Battery 113. Additional pits, open manholes, and trenches were observed throughout the Battery, but no others contained standing water. One liquid characterization sample was collected from one of the open pits (B113-LC02-01) for laboratory analysis of VOCs, SVOCs, PCBs, and metals. A second sample was not collected from the other pit with water because it appeared to contain human waste.

The Power Room was identified during the site survey and two diesel storage tanks (identified as 150-gallon Tanks 3 and 4 in site records) were still present on the wall in good condition. No labels were present on the tanks. The field team was able to determine that fluid was still present in the Tanks and one liquid characterization sample (B113-LC01-01) was collected for fuel analysis, ignitability, and toxicity for purposes of disposal characterization. Approximately 16 L of volume was collected for fuel characterization and volume was still present in the tanks; however, the field team could not determine the remaining volume in the tanks. A level meter was present on the wall adjacent to the tanks, which indicated the tanks volume was 3/4 full; however, the field team could not verify the meter's purpose or whether it was still working.

Three extremely rusted, unlabeled cylinders were present below Tanks 3 and 4; however, the cylinders appeared to be empty. Additionally, trenches with piping were present in the Power Room; some of the trenches were covered with metal plate covers and others were covered with wooden planks. The wooden planks were rotting and falling apart in most places. No tanks or storage units were observed in the trenches. Additionally, the Cashin report had mentioned drums present in the power room near Tanks 3 and 4 (Cashin 1998), however, no drums were present in the Power Room at the time of the field survey.

An electric room on the North side of the Power Room was identified, containing portions of a former transformer labeled as Marcus Transformer Company, Inc., and four severed single conductor electric breakout cables mounted on the wall. Dried oil was observed on parts of the transformer carriage and oil staining was noted on the concrete floor in this area. One wipe sample (B113-WP01-01) was collected from the oil-stained surface and one concrete chip sample (B113-CC01-01) was collected at the location of the stained concrete, using the hammer drill with a decontaminated drill bit. Additionally, an equipment blank was collected from the decontaminated

drill bit after sampling. The wipe sample, concrete chip sample, and equipment blank were submitted for laboratory analysis of PCBs.

Phase I sampling locations at Battery 113 are shown on **Figure 4-2**.

Deviations from the RI WP: Per the RI WP, if liquid was present in the tanks or drums in Battery 113 during the site survey, a liquid characterization sample was to be collected for VOCs, SVOCs, PCBs, and metals at RTI Laboratories. Because the liquid present in the Battery 113 tanks appeared to be weathered fuel, samples were instead collected for fuel analysis (ignitability and toxicity) for purposes of disposal. Samples were submitted to AB Environmental (Bohemia, NY) via subcontract with CGE.

4.2 Battery 112

Battery 112, also known as Bunker-3, is also associated with UST 36 and UST 37, which were located outside the battery. Battery 112 consisted of two 16-inch casemated guns and battle allowances of ammunition and powder charges were stored within the battery. Battle allowances of ammunition and powder charges for the Camp Hero battery guns were stored within the individual batteries of the camp. Battery 112 had a battle allowance of 200 16-inch 2,240-lb projectiles.

The Cashin Report noted that the "as-built" plans for Battery 112 show that the floor plan for Battery 113 and Battery 112 (Bunker 3) are identical; however, no tanks or waste drums were observed in Battery 112 in the Cashin Report.

Phase I Field Operations: A site survey was recommended in the RI WP to confirm that ASTs are not present in Battery 112 and to complete a visual inspection for evidence of PCB-contaminated stained concrete.

Deviations from the RI WP: It was noted in the Project Kick-Off Meeting in October 2015 that Battery 112 is sealed and access inside the building was not feasible. Access to Battery 112 was assessed during the Phase I field operations; however, Mr. Tom Dess, NY State Park Superintendent, indicated that the building was completely sealed and that safe access was not available, and therefore the site survey was not completed.

4.3 Building 107

Building 107 is also known as Building 5 (Cashin Report) or the Electrical Substation. The Cashin Report noted that transformers were in the basement of the building and may have contained or contain PCBs. Archive pictures of Building 107 show multiple electrical conduits in a concrete trench with metal covering that extended to the power generating building 203.

In an August 2000 environmental assessment, a stained area was noted in the northeast corner of the basement of Building 5, which was three feet by five feet in area. At that time, there was an opening to the outside approximately three to four feet above the floor. No floor drains were observed in the basement where the four transformers are still mounted on the wall. A concrete chip sample was collected from the stained area (Weston 2000).

Analytical results indicated that PCBs were present within the observed oil stain at a level above the Toxic Substances Control Act (TSCA) unrestricted use limit of 1 milligram per kilogram (mg/kg). Based on the depth of the PCBs in the concrete, it appeared that the oil had not migrated outside the building at that time. The findings indicated that no significant ecological or human health threats existed via migration.

Phase I Field Operations: Access to the basement of Building 107 was available for the field team upon arriving on-site; a hole was present in the Northeast corner of the building. The field team performed a visual survey Building 107. Parts of the wall-mounted transformer were still present in the basement. The field team attempted to verify if fluids are present in the transformers but was not able to open the pieces of the transformer which were still present. However, dried oil was running down the side of the wall-mounted portions of the transformer and minimal staining was noticed on the concrete. Three samples were collected for analysis of PCBs: one sample of the dried fluid (107-LC01), one wipe sample on the surface of the stained transformer (107-WP01), and one concrete chip sample within the stained area (107-CC01). The Phase I sampling locations at Building 107 are shown on **Figure 4-3**. The integrity of the original building was not be impacted during the sampling effort.

Deviations from the RI WP: None.

4.4 Building 201

Building 201 is also known as Building 1 (Cashin Report), Building #P-201, the Radar Tower, and AN/FPS-35. Building 201 is a 5-story radar tower with 2-foot thick concrete walls and was sealed off by USACE and NYS Parks to prohibit entrance. The building has a large steel radar dish, which was a prime component of the DoD early detection radar systems. Building 201 was associated with UST 20, which was removed and included in NYSDEC Spill Report #93-12038.

The Cashin Report recommended further investigation for possible oil leaks and PCB releases. In an August 2000 Data Collection Report (Weston 2000), the first floor of the Radar Tower contained a stained area, which was approximately four feet by six feet in area. The stained area was present below several pipes extending from the ceiling labeled "refrigerated water return." The stained area was reported as not darkly stained and adjacent to a six-inch diameter floor drain. The concrete

was not stained below 0.5 inches. One chip sample (from the stained area), four surficial soil, and one subsurface soil sample was obtained at the Radar Tower for PCB analysis (Weston 2000).

PCBs were detected in the surface soil only at sample location (SS-14) at the Radar Tower. Aroclor 1254 was detected at 1.4 mg/kg, which is just above the TSCA unrestricted use limit of 1 mg/kg. Based on the data provided in the 2000 report, the area of contamination appears to be minimal, as no PCBs were detected above the regulatory criteria in adjacent samples collected within 50 ft of that location (Weston 2000).

Additionally, analytical results indicated that PCBs were present within the observed concrete oil stain at a level above the TSCA unrestricted use limit of 1 mg/kg in the Radar tower. Based on the depth of the PCBs in the concrete, it appeared that the oil had not migrated outside the building. The findings indicated that no significant ecological or human health threats existed via migration. Weston recommended that the stains addressed by concrete removal, painting, or controlling building access (Weston 2000).

A structure adjacent to the Radar Tower was also noted in the Data Collection Report, which appeared to be a cesspool. A cesspool was also identified on sanitary drawings obtained during the records research for this RI WP.

In 2002, the Radar Tower was listed on the National Register of Historic Places through the Department of the Interior. The NY State Office of Parks, Recreation, and Historic Preservation and the Department of Interior were contacted prior to beginning the Phase I investigation at this AOC. Sampling at this located was minimally-invasive during Phase I to ensure the preservation and conservation of the Radar Tower and Antenna.

Phase I Field Operations: One Geoprobe[®] boring was conducted adjacent to the former Radar Tower cesspool to 25 ft bgs. Water was not encountered in the boring. The soil core was screened with a PID; no readings above 0.0 parts per million (ppm) were observed and there were no visual indicators of staining. Two soil samples were obtained from the boring, from 9 to 10 ft bgs and from 24 to 25 ft bgs, and submitted for laboratory analysis of VOCs, SVOCs, PCBs, and metals, which may have been released to the cesspool from historic activities at the Radar Tower.

A temporary well was placed in the boring with a 10-foot screen; however, the well was dry upon gauging four days later and a groundwater sample could not be collected. The Phase I sampling location at Building 201 is shown on **Figure 4-4**.

Deviations from the RI WP: A site survey of the bottom floor of the Radar Tower where transformers and staining was observed during previous assessment (Weston 2000) was proposed

in the RI WP. However, safe access inside the Radar Tower was not available during Phase I RI activities. Mr. Tom Dess, NY State Park Superintendent, indicated that the building was completely sealed, the structures and stairwells inside are not stable, and he did not believe it is safe for anyone to enter. As such, a site survey inside the Radar Tower was not completed and the proposed PCB wipe sample was not collected.

4.5 Battery 216

The Records review revealed concern for potential buried metal debris, unknown USTs, or underground vaults around Battery 216. The RI WP recommended a geophysical survey around the building and Geoprobe® borings if underground anomalies were identified.

Phase I Field Operations: A geophysical survey was conducted around the Battery to confirm the absence or presence of underground anomalies. The geophysical survey results indicated mostly debris or infrastructure, as identified on the geophysical survey map in Attachment E. No responses of significant size to be considered vaults or storage facilities or unique features which would require new sampling locations were identified. No borings were advanced and no environmental samples were collected.

Deviations from the RI WP: None.

4.6 Plotting Room 113

Records review revealed concern for potential buried metal debris or unknown USTs around Plotting Room 113. The RI WP recommended a geophysical survey around the building and Geoprobe® borings if underground anomalies were identified.

Phase I Field Operations: A geophysical survey was conducted around Plotting Room 113 in May 2016 to confirm the absence or presence of underground anomalies. The geophysical survey results indicated a potential waste area on the north side of the building, with concentrated subsurface metal debris, as identified on the geophysical survey map in Attachment E.

In June 2016, three borings were conducted to the depth of the perched aquifer within the subsurface anomaly area (P113-SB01 through -SB03). The soil cores were screened with a PID; no readings above 0.0 ppm were observed. Two soil samples were collected per boring from P113-SB01 and -SB02: one from the upper portion and one just above the soil-groundwater interface. Only one sample was collected from P113-SB03 because the groundwater was encountered at 1 ft bgs. Soil samples were submitted for laboratory analysis of the NYSDEC STARS lists for fuel oil and gasoline VOCs, SVOCs, and lead.

A temporary well was installed in each boring. One grab groundwater sample was collected from each boring and submitted for laboratory analysis of VOCs, SVOCs, and lead. Phase I sampling locations at Plotting Room 113 are shown on **Figure 4-5**.

Deviations from the RI WP: None.

4.7 Building 2010 (UST 30)

Building 2010 was formerly operated as a groundwater supply well pump house. The well house contained a power generator for groundwater pump operation which was connected to UST 30. A 100-gallon gasoline UST was removed from the southeast corner of Building 2010 in October 1993. The excavation was 4.5 ft by 7 ft by 4.5 ft deep. The NYSDEC Tank Removal Form indicated that no release had occurred from the UST. Low levels of petroleum were detected in soil samples from the excavation; however, lead was reported to be as high as 600 ppm (NYSDEC Tank Removal Form, December 1994).

Phase I Field Operations: To determine the presence or absence of lead in soil and groundwater, two Geoprobe® borings (2010-SB01 and -SB02) were advanced adjacent to the former 100-gallon UST excavation at the southeast corner of Building 2010 to a depth of 7 ft bgs. Four soil samples were collected from each boring, from the 0 – 4 ft bgs, 4 – 5 ft bgs, 5 – 6 ft bgs, and 6 – 7 ft bgs intervals, for laboratory analysis of lead.

A temporary well was set in 2010-SB02 and a grab groundwater sample was collected for laboratory analysis of lead. Phase I sampling locations at Building 2010 are shown on **Figure 4-6**.

Deviations from the RI WP: A temporary well was not placed at 2010-SB01 and thus a groundwater sample was not obtained from this boring; the on-site USACE and AECOM geologists agreed that the formation was too tight to produce sufficient water for sample collection.

4.8 Building F100C (UST 34)

Building F100C has previously been referred to in the Cashin Report as Building 40 and formerly operated as a groundwater well supply pump house. UST 34 was a 275 gallon gasoline tank removed from the south side of Building F100C in October 1993. Ten yards of petroleum-impacted soil was removed from around the UST at that time. Low levels of petroleum were detected in soil samples from the excavation and lead was reported to be as high as 549 ppm (NYSDEC Tank Removal Report, December, 1994).

Phase I Field Operations: To confirm the presence or absence of lead above regulatory concentrations in soil and groundwater, two Geoprobe® borings were advanced immediately adjacent to the former 100-gallon UST excavation at the south of Building F100C to a depth of 7 ft

bgs. Four soil samples were collected from each boring, from the 0 – 4 ft bgs, 4 – 5 ft bgs, 5 – 6 ft bgs, and 6 – 7 ft bgs intervals, for laboratory analysis of lead.

Temporary wells were set in the borings and one grab groundwater grab sample was collected from each boring for laboratory analysis of lead. Phase I sampling locations at Building F100C are shown on **Figure 4-7**.

Deviations from the RI WP: None.

4.9 AST-35 (H-13)

One aboveground storage tank (AST) at Camp Hero (AST-35, also identified as H-13 in the Cashin Report) did not have complete closure documentation at the time of records review. The H-13 location was identified in the Cashin Report as a sewage holding tank; however, the Cashin Report and archive drawings indicated that a 200,000-gallon diesel fuel AST was located at this site (Cashin 1998). The archive research indicated that there was a 1,000-gallon release from this tank; however, the available documentation is incomplete.

Phase I Field Operations: Four Geoprobe® borings (AST35-SB01 through -SB04) were advanced to 10 ft bgs (just past the depth of the perched water table) around the concrete containment unit for the former AST, in compliance with 6 NYCRR 613.9(b). The soil cores were screened with a PID; no readings above 0.0 ppm were observed. However, elevated PID readings were observed at the adjacent Fuel Pump House (FPH) AOC (see below). Two soil samples were collected from each boring above the groundwater-soil interface. Soil samples were submitted for laboratory analysis of petroleum compounds by the NYSDEC STARS list for fuel oil VOCs and SVOCs.

A temporary well was installed in each boring and one groundwater sample was collected from each boring for analysis of VOCs and SVOCs. Phase I sampling locations at AST-35/H-13 are shown on **Figure 4-8**.

Deviations from the RI WP: The RI WP recommended that one of the four Geoprobe® borings were to be located within the containment unit of the former AST. However, access inside the containment wall was not available for the Geoprobe® rig, and the four borings were conducted around the accessible portions of the containment wall.

Additionally, the RI WP proposed two piezometers upgradient and downgradient of AST-35 to determine groundwater flow direction around AST-35, the FPH, and Building 203. However, piezometers were not needed within in the AST-35 AOC because the temporary wells installed at AST-35 and the FPH provided sufficient coverage of the area. However, three piezometers were installed at the Building 203 AOC to assist in determining groundwater flow direction.

4.10 Fuel Pump House and Distribution Line for AST-35

Archive drawings indicated that a fuel pump house is located on the northwest side of the former AST-35 pad and that a fuel line may have extended from the former AST-35 location to the former generators at Building 203. No additional information about the fuel line is available. During the January 2016 site walk, fuel odor was noticed inside the Fuel Pump House.

Phase I Field Operations: A geophysical survey was conducted around the fuel pump house in May 2016 to confirm the absence or presence of the fuel pipeline. The geophysical survey results identified the fuel pipeline extending southwest from the fuel pump house, as shown on the geophysical survey map in Attachment E. In June 2016, the fuel pump house distribution line was further traced with a hand-held magnetometer. Hand digging along the distribution line confirmed that the distribution line had been cut and removed after approximately 6-feet from the fuel house. Soil excavated from around the existing fuel line did not indicate noticeable staining or petroleum odor.

Four Geoprobe® borings (FPH-SB01 through -SB04) were conducted to 10 ft bgs around the FPH building and remaining portion of the distribution line, in compliance with 6 NYCRR 613.9(b) (NYCRR 2015b). The soil cores were screened with a PID; elevated PID readings were observed at locations FPH-SB02 (maximum of 13.0 PPM) and FPH-SB04 (maximum of 203 PPM). Water was encountered between 1 ft bgs and 5 ft bgs in the borings; two soil samples were obtained from each boring above the soil-water interface. Sample intervals were biased to depths where there were elevated PID readings or visual indicators of staining were observed. Soil samples were submitted for laboratory analysis of petroleum compounds by the NYSDEC STARS list for fuel oil VOCs and SVOCs.

A temporary well was installed in each boring and one groundwater sample was collected from each boring for analysis of VOCs and SVOCs. Petroleum odor was observed in the purge water from all four temporary wells. Phase I sampling locations at the FPH and Distribution Line for AST-35/H-13 are shown on **Figure 4-9**.

Deviations from the RI WP: The RI WP proposed nine soil borings at the FPH (three at the building, six along the distribution line to Building 203), at locations based on the results of the geophysical survey. However, because the fuel pipe was cut approximately 6 ft from the FPH, only four borings were conducted around the FPH and the remaining portion of the fuel line.

Additionally, the RI WP proposed that one of the borings would be conducted inside the FPH. However, access inside the FPH was not available and the Geoprobe® rig would not have been able to clear the ceiling of the FPH if access had been available. Therefore, borings were not completed inside the building but relocated immediately adjacent to the building.

4.11 Building 203

Former Building 203, the former power building, housed four large generators which supplied electrical power to Camp Hero. USTs outside of Building 203 were utilized to supply fuel and lubricants to the generators.

Previous Actions and Investigations: In 1994, UST 16 (25,000 gallon #2 fuel oil), UST 18 (25,000 gallon #2 fuel oil), and UST 17 (1000 gallon lube oil) were removed from the perimeter of former Building 203. USTs 16 and 18 were located on the south side of the building and UST 17 was located on the southeast side of the building. Upon removal of USTs 16 and 18, a green liquid that appeared to be ethylene glycol was observed on the sidewalls of the excavation and on water standing in the bottom of the excavation at 17 ft bgs. A solvent odor was present and it was suspected that solvents had been dumped around the building based on visual evidence of surface soil staining and elevated volatile and semivolatile laboratory results of soil. The area behind former Building 203 and adjacent to the USTs was described as a dumping ground for waste oil and spent solvents. A French drain was also observed during excavation activities to surround the Building 203 foundation. The French drain was suspected of acting as a conduit to allow hazardous liquids to migrate around the foundation of the building and into the subsurface soil (NYSDEC Spill Report 93-09575 1993).

Additionally, several drums of glycol were identified at the site during the 1993 UST removal action and several hundred feet of piping containing 150 gallons of ethylene glycol were noted in the former power generator building, presumably used for cooling the generators (NYSDEC Spill Report 93-09575 1993). However, ethylene glycol is a clear, colorless, and viscous liquid that is miscible in water and rapidly biodegrades in soils. It is very likely that ethylene glycol in soils would not be detected at this time decades after it was released. In addition, the soils and foundation around former Building 203, which likely contained ethylene glycol, were excavated during decommission of the building.

In 1995, the single excavation pit for USTs 16 and 18 was over-excavated and 2,500 yards of soil were removed. A Site Assessment Report was submitted for the site to NYSDEC in June 1995 (USACE, 1995). Nine Geoprobe[®] borings were conducted surrounding the USTs excavation and two Geoprobe[®] locations were conducted near the center of the excavation. The Geoprobe[®] location near the center of the excavation was advanced to 53 ft bgs in an attempt to reach groundwater; however, no groundwater was intercepted to this depth. Dense clay was found at depth and surrounding the UST excavation. A soil sample was taken at 53 ft bgs with analysis results below screening criteria. A temporary well was installed to 21 ft below grade, which slowly recharged with groundwater overnight. The results of the soil samples and the groundwater sample taken from the Geoprobe[®] boreholes were below screening criteria. However, the laboratory method detection

limits utilized in the assessment at that time are roughly 10 orders of magnitude higher than what is currently required to evaluate human health risk. The Spill Report Case was closed by the NYSDEC in July 1995.

In 2000, during additional site-wide environmental assessment at Camp Hero by the USACE, a surface water sample was obtained from a drainage area below Building 203 near where a small ditch leading from Building 203 was observed to outfall (Weston 2000). The sample was analyzed for PCBs, SVOCs, and metals. No PCBs or SVOCs were detected in the surface water sample. Two metals, zinc and arsenic, were detected in the sample but were below screening criteria.

Phase I Field Operations: Five Geoprobe® borings (203-SB01 through -SB05) were advanced within the area of the former Building 203 and UST excavation to the depth of the perched aquifer or to 25 ft bgs, whichever was encountered first. Building 203 and USTs have been excavated and replaced with clean fill; the borings were located just beyond the excavation and fill zones to the extent possible. The soil cores were screened with a PID; no readings above 0.0 ppm were observed in borings 203-SB01 through -SB03, but elevated readings of up to 11.3 ppm and 402.8 ppm were observed in borings 203-SB04 and -SB05, respectively. A dense clay layer was encountered between 2 and 20 ft bgs across the AOC; the Phase I RI soil sampling was focused on the layer just above the clay as a potential contaminant transport zone from former Building 203 and the USTs.

Two subsurface soil samples were collected from each boring above the sand-clay interface, with the exception of 203-SB02, because the clay layer was encountered at 2 ft bgs. Sample intervals focused on those with the largest PID readings, if elevated PID readings were observed. Soil samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, and metals.

Temporary wells were installed in the borings and grab groundwater samples were collected for laboratory analysis of VOCs, SVOCs, PCBs, and metals. However, recharge in some of the wells was insufficient to collect the required volume for all planned analyses. The wells were visited multiple times by the sampling team and the collected volume was submitted for laboratory analysis of a shortened analyte suite: VOCs, metals, and one liter for SVOCs were submitted.

Additionally, three piezometers were installed upgradient and downgradient of the Building 203 UST 16 and 18 excavations (PZ-1 through PZ-3) to help determine radial groundwater flow and direction information in the vicinity; analytical samples were not collected from these piezometers. Phase I sampling locations and piezometer locations at Building 203 are shown on **Figure 4-10**.

Upon gauging the piezometers, approximately 5 ft of light non aqueous phase liquid (LNAPL) was observed in piezometer PZ-3. The LNAPL appeared to be weathered petroleum product. Thickness

was physically measured to be 8.00 ft to 13.30 ft with 5 ft measured using an interface probe. A petroleum release at AOC Building 203 was made to the NYSDEC hotline by USACE (Ms. Megan Cullen). Pollution Complaint Number PC-1602757 was assigned to the reported release. Mr. Dess (NYS Camp Hero Park Superintendent) was also notified that a release at former Building 203 had been reported to NYSDEC.

Deviations from the RI WP: As detailed above, an abbreviated analytical suite was submitted due to recharge of groundwater in the temporary wells. Additional piezometers were installed to help determine groundwater flow direction, which were not in the RI WP.

4.12 Suspected Tank A

Seven suspected tanks were identified during the records review (Suspected Tanks A through G); no closure documentation was available for these tanks, but archive drawings indicated possible locations of the tanks. The suspected UST located behind former Building 20 (former Fire Department) was designated Suspected Tank A.

Phase I Field Operations: A geophysical survey was conducted around former Building 20 to confirm the absence or presence of Suspected Tank A. The geophysical survey results indicated subsurface anomalies, including inferred utility junctions, documented culvert end-points, and confirmed fence-line and building infrastructures, as identified on the geophysical survey map in Attachment E. However, a tank-sized object was not identified at the location indicated in the archive drawings, nor elsewhere in the survey data, implying that the tank had been removed. Additionally, no unique features were identified which should present new concerns of potential environmental release or require new sampling locations.

Because no tank-sized features were identified in the geophysical survey, no borings were advanced and no environmental samples were collected.

Deviations from the RI WP: None.

4.13 Suspected Tank B

Seven suspected tanks were identified during the records review summary (Suspected Tanks A through G); no closure documentation was available for these tanks, but archive drawings indicated possible locations of the tanks. A suspected UST located at Building 22 was designated Suspected Tank B.

Phase I Field Operations: A geophysical survey was conducted around Building 22 to confirm the absence or presence of Suspected Tank B. The geophysical survey results identified two possible tanks on the east side of Building 22, as identified on the geophysical survey map in

Attachment E. The location the first of the two anomalies was consistent with location of the suspected tank identified in historical records (Suspected Tank B). The second tank-like anomaly was just north of Building 109. This anomaly was designated as Suspected Tank H and was investigated as a separate AOC (see below). Signals received to the west side of Building 22 were considered to be likely associated with subsurface utilities.

In June 2016, small "test holes" were conducted at the Suspected Tank B location using shovels. Miscellaneous building debris was uncovered, but no evidence of a tank was identified. However, a petroleum odor was noted in the uncovered soil; therefore, four borings (STB-SB01 through -SB04) were advanced to 10 ft bgs (just below the depth of the water table) in the vicinity of the petroleum odor. The soil cores were screened with a PID; no readings above 0.1 ppm were observed. One sample was collected from each boring just above the soil-water interface. An additional three surface soil samples were collected (STB-SS05 through -SS07) from 0 to 1 ft bgs in the vicinity of the borings. Soil samples were submitted for analysis of the NYSDEC STARS list for fuel oil VOCs and SVOCs.

Temporary wells were placed in the borings. Because a tank was not present in the subsurface, grab groundwater samples were only collected from two of the borings: one up-gradient and one down-gradient of the soil with petroleum odor (STB-SB01 and -SB03, respectively). Groundwater samples were submitted for analysis of VOCs and SVOCs. Phase I sampling locations at Suspected Tank B are shown on **Figure 4-11**.

Deviations from the RI WP: The RI WP proposed collection of two samples per boring and no separate surface soil samples; because no tank was located, only one sample was collected per boring and an additional three surface soil samples were collected. Surface soil samples were added based on the observation of petroleum odors in near surface soils but not at depth in the borings. The RI WP also proposed collection of four grab groundwater samples if a tank was located. Because no tank was located, only two grab groundwater samples were collected.

Additionally, after the May 2016 field activities, USACE and AECOM-Tidewater JV discussed collection of a grab groundwater sample from the existing well in the parking lot behind Building 22. During the June 2016 field activities, the USACE and AECOM-Tidewater JV team agreed that samples will not be collected from monitoring wells during Phase I; rather, the well will be sampled via low-flow methodology during Phase II when other newly-installed monitoring wells are sampled, pending results of the Phase I investigation.

4.14 Suspected Tank C

Seven suspected tanks were identified during the records review summary (Suspected Tanks A through G); no closure documentation was available for these tanks, but archive drawings indicated

possible locations of the tanks. A suspected UST located at former Building 2 was designated Suspected Tank C.

Phase I Field Operations: A geophysical survey was conducted around former Building 2 to confirm the absence or presence of Suspected Tank C. The geophysical survey identified multiple underground anomalies in the area of former Building 2, one of which was consistent with the location of the suspected tank identified in historical records, as identified on the geophysical survey map in Attachment E. Five additional anomalies were identified which were believed to be historic underground utilities.

In June 2016, small “test holes” were conducted at the Suspected Tank C location identified by the geophysical survey using shovels. Miscellaneous building debris was uncovered, and no evidence of a tank or petroleum-contaminated soil was identified. Therefore, no borings were conducted and no environmental samples were collected.

Deviations from the RI WP: None.

4.15 Suspected Tank D

Seven suspected tanks were identified during the records review summary (Suspected Tanks A through G); no closure documentation was available for these tanks, but archive drawings indicated possible locations of the tanks. A suspected UST located at former Building 104R was designated Suspected Tank D.

Phase I Field Operations: A geophysical survey was conducted around Building 104R to confirm the absence or presence of Suspected Tank D. The geophysical survey results indicated an abundance of utility connections along with former building and concrete pad infrastructure, as identified on the geophysical survey map in Attachment E. However, a tank-sized object was not identified at the location indicated in the archive drawings, nor elsewhere in the survey data, implying that the tank had been removed. Additionally, no unique features were identified which should present new concerns of potential environmental release or require new sampling locations.

Because no tank-sized features were identified in the geophysical survey, no borings were advanced and no environmental samples were collected.

Deviations from the RI WP: None.

4.16 Suspected Tank E (Building 3001)

Building 3001 has also historically been referred to as Building 47 (Cashin Report), State Park Police Lilco Building, and AT&T Building. UST 26 was previously removed from Building 3001, and another tank (AST 49) remains in use at the building. Archive drawings suggested a third UST in the vicinity

of the former UST 26 location (Suspected Tank E). Additionally, one existing well is located on the South side of Building 3001, which was previously used as a water source in the building prior to connection to Suffolk County Water in 2011. The RI WP recommended collection of one grab groundwater sample from the existing well for analysis of VOCs and SVOCs.

Phase I Field Operations: A geophysical survey was conducted around Building 3001 to confirm the absence or presence of Suspected Tank E. The geophysical survey results indicated building and fence-line interference, along with verified manholes and telephone pole surface features, as identified on the geophysical survey map in Attachment E. However, a tank-sized object was not identified at the location indicated in the archive drawings, nor elsewhere in the survey data, implying that the tank had been removed. Additionally, no unique features were identified which should present new concerns of potential environmental release or require new sampling locations. Because tank-sized features were not identified in the geophysical survey, borings were not completed at this AOC.

Additionally, the existing well, which is no longer used at Building 3001, could not be sampled as the well is disconnected and access to groundwater through the well head seal was not available.

Deviations from the RI WP: None.

4.17 Suspected Tank F

Archive figures indicated that Suspected Tank F could be located at the pump house near Battery 216 (also known as Bunker-4). This groundwater pump house was suspected to have a UST in proximity to the building, because similar pump house on Camp Hero had a 100 gallon gasoline UST removed.

Phase I Field Operations: A geophysical survey was conducted in the vicinity of the pump house near Battery 216 to confirm the absence or presence of Suspected Tank F. Due to dense vegetation and terrain, the area was assessed using AGM. Interferences (e.g., buildings, fences) or metallic items large enough to represent a UST were not identified, as shown on the geophysical survey map in Attachment E. Because tank-sized features were not identified, no borings were advanced and no environmental samples were collected.

Deviations from the RI WP: None.

4.18 Suspected Tank G

An additional pump house was noted at Well 4 during the January 2016 site walk. This groundwater pump house was suspected to have a UST (Suspected Tank G) in proximity to the building, because similar pump house on Camp Hero had a 100 gallon gasoline UST removed.

Phase I Field Operations: A geophysical survey was conducted around the pump house to confirm the absence or presence of Suspected Tank G. Due to dense vegetation and terrain, the area was assessed using AGM. No interferences (e.g., buildings, fences) or metallic items large enough to represent a UST were identified, as shown on the geophysical survey map in Attachment E. Because no tank-sized features were identified, borings were not completed at this AOC.

4.19 Suspected Tank H

Seven suspected tanks were identified during the records review summary (Suspected Tanks A through G). Geophysical surveys were conducted in May 2016 to confirm the presence or absence of the suspected tanks. During the geophysical survey around Building 22, an additional tank-sized anomaly was identified just north of Building 109. This anomaly was designated as Suspected Tank H and was investigated as a separate AOC.

Phase I Field Operations: In June 2016, small “test holes” were conducted at the Suspected Tank H location using shovels. Miscellaneous building debris was uncovered, but there was not any evidence of a tank or petroleum impacts. Therefore, borings were not completed at this AOC.

Deviations from the RI WP: The Suspected Tank H AOC was not included in the RI WP but was added to the investigation after the geophysical surveys in May 2016.

4.20 Abandoned Waste Disposal System (Site-Wide)

The site-wide Abandoned Waste Disposal System is a suspected former area of hazardous waste dumping. The abandoned site-wide sanitary sewer was identified during the 2016 historical records search from archive drawings of Camp Hero provided by the NY State Parks; the system was abandoned and has not been used by the NY State Parks. The drawings indicate that septic fields and cesspools were also utilized at Camp Hero prior to construction of the site-wide sanitary sewer system. The system was connected to a chlorine chamber for treatment prior to discharge to the Atlantic Ocean at a headwall outfall. The location of the site-wide sanitary sewer line and former septic fields and cesspools are shown on the Site Map (**Figure 1-2**).

Phase I Field Operations: Twenty-seven Geoprobe® borings (WDS-SB01 through -SB27) were advanced throughout the abandoned waste disposal system, at locations targeting former leach fields and cesspools downgradient from buildings which may have utilized hazardous materials. Boring locations were biased to potential weak sites or collection areas along the sewer line, such as locations of 90-degree turns, where the sanitary line was joined by a secondary sanitary line from former operations buildings, collection tanks, and at the chlorine contact chamber. The locations of former sanitary leach fields, septic tanks, and cesspools utilized prior to construction of the site-wide sanitary sewer system were also included in the soil and groundwater sampling.

Borings were advanced to the depth of the targeted abandoned waste disposal system features (bottom of the leach field, septic tank, cesspool, etc.). The soil cores were screened with a PID; readings above 0.0 ppm were not observed. One soil sample was collected from each boring at depth. Temporary wells were set in each boring and grab groundwater samples were collected. Soil and groundwater samples were sent to the laboratory for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sample locations for the site-wide abandoned waste disposal system are shown on **Figures 4-12 through 4-16**.

Deviations from the RI WP: At some locations, groundwater recharge was insufficient to fill all required sample bottleware, even after multiple attempts; in those instances, the volume obtained was submitted for analysis of shortened list of analytes.

4.21 Motor Pool

The Motor Pool building contained a hydraulic lift for vehicle maintenance. According to the State Park Superintendent (Mr. Tom Dess) in a phone interview, the concrete floor over the hydraulic lift was capped at the time the State Park began utilizing the Facility. Since that time, the Motor Pool building has been beneficially reused by the NY State Park. A 1940 Camp Hero archive site map identifies the Motor Pool building was once utilized as an Ordnance Repair Shop. A floor drain was likely present in the building during DoD use of the building.

Additionally, a cesspool on the east side of the motor pool, downgradient from the building, has also been identified through the historical records search. There is potential that petroleum, munitions constituents, and/or hazardous materials may have drained through the floor drain, which may have led to the cesspool. There was no evidence of a discharge pipe from the Motor Pool Building to the ground surface outside of the Motor Pool Building observed during a site walk over in this area conducted on 3 November 2015 during the project kick-off meeting.

One existing groundwater supply well currently utilized for non-potable purposes at the Motor Pool (untreated tap) is located on the west side of the building.

Phase I Field Operations: At the location of the former hydraulic lift, one Geoprobe® boring (MP-SB01) was advanced through the concrete slab adjacent at the former hydraulic lift to 10 ft bgs, just past the depth of the bottom of the former lift, which is assumed to be 8 to 10 ft bgs. Concrete coring was conducted prior to boring. Additionally, concrete and debris were encountered in the boring around 9 ft bgs. The soil core was screened with a PID; elevated PID readings from 5 to 10 ft bgs were observed (maximum of 21.0 ppm). One soil sample was collected 4 to 5 ft bgs from the non-native and native soil interface, which was also just above the soil-water interface, for analysis of the NYSDEC STARS list for fuel oil VOCs and SVOCs. A temporary well was placed in the boring and a grab groundwater sample was collected for analysis of VOCs and SVOCs. Petroleum

odor was observed in the purge water during groundwater sample collection. The temporary well was abandoned and the concrete was patched at grade once sample collection was complete.

Adjacent to the location of the former floor drain to the cesspool just outside the building (approximately 6 ft from the edge of the building), one Geoprobe® boring (MP-SB02) was advanced to 15 ft bgs, just past the depth of the perched water table. The soil core was screened with a PID; no readings above 0.0 ppm were observed. Two soil samples were collected from the boring: one surface soil sample from 0 to 1 ft bgs and one subsurface soil sample from 11 to 12 ft bgs, just above the soil-water interface. Soil samples were submitted for laboratory analysis of the NYSDEC STARS list for fuel oil VOCs and SVOCs and for energetics. A temporary well was placed in the boring and a grab groundwater sample was collected for analysis of VOCs, SVOCs, and energetics.

Along the sewer line from the building to the cesspool, one Geoprobe® boring (MP-SB03) was advanced to 15 ft bgs, just past the depth of the perched water table. Two soil samples were obtained from the boring: one surface soil sample from 0 to 1 ft bgs and one subsurface soil sample from 8 to 9 ft bgs, just above soil-water interface, for laboratory analysis of the NYSDEC STARS list for fuel oil VOCs and SVOCs, PCBs, and energetics. A temporary well was placed in the boring and a grab groundwater sample was collected for analysis of VOCs, SVOCs, PCBs, and energetics.

Additionally, one grab groundwater sample was collected from the existing well located on the west side of the Motor Pool from an available untreated tap for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, energetics, and metals. The Phase I sampling locations at the Motor Pool are shown on **Figure 4-17**.

Note that an additional soil boring (WDS-SB11) was conducted immediately adjacent to the cesspool as part of the site-wide abandoned waste disposal system AOC.

Deviations from the RI WP: None.

4.22 Engineering Field Office

A former engineering field office building was identified on a 1940 site map located adjacent to the Motor Pool building. The 1940 site map identifies the motor pool building as once utilized as an Ordnance Repair Shop. Archive pictures of the engineering field office indicate it was a two-story high wooden building with double doors. Work related to ordnance repair may have also occurred in the engineering field office located adjacent to the Motor Pool building.

Phase I Field Operations: One soil boring was advanced downgradient of the former engineering field office, on the south side of the building within the drainage area adjacent to the building foundation, to 14 ft bgs. Two soil samples were collected from the boring, one surface soil sample (0 to 1 ft bgs) and one subsurface soil sample just above perched groundwater-soil interface (7 to 8 ft bgs), for laboratory analysis of energetics. One grab groundwater sample was also collected from a temporary well for analysis of energetics. The Phase I sampling location for the Engineering Field Office is shown on **Figure 4-18**.

Deviations from the RI WP: None.

4.23 Former Building 34

During the May 2016 Phase I RI activities, the USACE and AECOM-Tidewater JV team discovered a building foundation, old furnace, and building debris in the H-16 area east of the Motor Pool Building at former Building 34. USACE requested that AECOM review locations of proposed borings and surface and near-surface soil samples at nearby H-5 and H-16 in relation to this debris and shift sample locations to cover this debris area. This area was identified as a new AOC, former Building 34.

Phase I Field Operations: One Geoprobe® boring (034-SB01) was advanced to 10 ft bgs on the north side of former Building 34. Water was encountered at 2 ft bgs. The soil core was screened with a PID; no readings over 0.0 ppm were observed. Two soil samples were collected from the boring: one surface soil sample from 0 to 1 ft bgs and one subsurface soil sample from 1 to 2 ft bgs, just above the soil-water interface. Soil samples were submitted for laboratory analysis of PAHs, PCBs, and metals. A temporary well was placed in the boring and a groundwater sample was collected for laboratory analysis of PAHs, PCBs, and metals.

Additionally, four co-located surface soil and near-surface soil samples (locations 034-SS02 through -SS05) were collected downgradient of the debris toward the embankment of revetments southeast of former Building 34. The revetments are narrow, wooden stream channelization structures found in stream beds throughout Camp Hero State Park, which appear to have been installed to control surface water flow across the facility. Surface soil and near-surface soil samples were submitted for laboratory analysis of PAHs, PCBs, and metals. Phase I sample locations at former Building 34 are shown in **Figure 4-19**.

Deviations from the RI WP: This is a new AOC that was not included in the WP.

4.24 Drum Location (H-1)

During the Camp Hero FS (Cashin 1998), six locations were observed with one or two 55-gallon drums or drum remnants (H-1, H-2, H-3, H-18, H-20, and H-22).

Phase I Field Operations: A site survey was conducted to verify the number of drums present at H-1. One drum was present with no labeling or identification. No liquid was present in the drum. Two co-located surface soil (0 to 1 ft bgs) and near-surface soil samples (1 to 2 ft bgs) were collected from underneath the drum for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-1 are shown on **Figure 4-20**.

Deviations from the RI WP: None.

4.25 Drum Location (H-2)

During the Camp Hero FS (Cashin 1998), six locations were observed with one or two 55-gallon drums or drum remnants (H-1, H-2, H-3, H-18, H-20, and H-22).

Phase I Field Operations: A site survey was conducted to verify the number of drums present at H-2. One drum was present with no labeling or identification. Liquid was not present in the drum. Two co-located surface soil (0 to 1 ft bgs) and near-surface soil samples (1 to 2 ft bgs) were collected from underneath the drum for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-2 are shown on **Figure 4-21**.

Deviations from the RI WP: None.

4.26 Drum Location (H-3)

During the Camp Hero FS (Cashin 1998), six locations were observed with one or two 55-gallon drums or drum remnants (H-1, H-2, H-3, H-18, H-20, and H-22).

Phase I Field Operations: A site survey was conducted to verify the number of drums present at H-3. One drum was present with no labeling or identification. Liquid was not present in the drum. Two co-located surface soil (0 to 1 ft bgs) and near-surface soil samples (1 to 2 ft bgs) were collected from underneath the drum for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-3 are shown on **Figure 4-22**.

Deviations from the RI WP: None.

4.27 Construction Debris Area (H-4)

The Cashin Report noted areas H-4 and H-6 contained construction debris.

Phase I Field Activities: A walk-over survey was conducted to identify the amount and location of construction debris at H-4.

Three Geoprobe® borings (H4-SB01 through -SB03) were advanced to 10 ft bgs (just past the depth of the perched aquifer) under the debris or on the downgradient edge of the debris. The soil

cores were screened with a PID; no readings above 0.0 ppm were observed. Two soil samples were obtained from each boring: one surface soil sample from 0 to 1 ft bgs interval and one subsurface soil sample just above the perched groundwater-soil interface.

Temporary wells were installed in each boring. One grab groundwater sample was collected from each boring. Soil and groundwater samples were analyzed for lead from lead-based paint and PCBs. Phase I sampling locations at H-4 are shown on **Figure 4-23**.

Deviations from the RI WP: None.

4.28 Drum Location with Construction Debris (H-5)

Five drums and construction debris were noted at area H-5 in the Cashin Report, located in a topographic swale southeast of the Motor Pool Building (Cashin 1998). Three of the drums were identified as contents unknown. However, there was no evidence of these drums present during a Site Walk Over in this area conducted on November 3, 2015 during the RI/FS Project kick-off meeting. Tom Dess (NYS Camp Hero Superintendent) indicated the parks had removed the debris and a motorcycle frame from the area previously.

Phase I Field Operations: Four surface soil samples (0 to 1 ft bgs) and four co-located near-surface soil samples (1 to 2 ft bgs) were collected in the vicinity of the former drums and construction debris. The two soil sample locations near the former drums (H5-SS01 and -SS02) were sampled for VOCs, SVOCs, PCBs, and metals. The two soil samples at the construction debris area (H5-SS03 and -SS04) were analyzed for lead from lead-based paint and PCBs. Phase I sampling locations for H-5 are shown on **Figure 4-24**.

Deviations from the RI WP: Eight surface soil and eight near-surface soil samples were proposed for H-5 in the RI WP. During the May 2016 site walk, USACE and AECOM-Tidewater JV agreed that four sample locations instead of eight were sufficient.

4.29 Construction Debris Area (H-6)

The Cashin Report noted areas H-4 and H-6 contained construction debris.

Phase I Field Activities: A walk-over survey was conducted to identify the amount and location of construction debris at H-6.

Three Geoprobe® borings (H6-SB01 through -SB03) were advanced to 8 ft bgs (just past the depth of the perched aquifer) under the debris or on the downgradient edge of the debris. The soil cores were screened with a PID; no readings above 0.0 ppm were observed. Two soil samples were obtained from each boring, one surface soil sample from 0 to 1 ft bgs interval and one subsurface soil sample just above the perched groundwater-soil interface.

Temporary wells were installed in each boring. One grab groundwater sample was collected from each boring. Soil and groundwater samples were analyzed for lead from lead-based paint and PCBs. Phase I sampling locations at H-6 are shown on **Figure 4-25**.

Deviations from the RI WP: None.

4.30 Possible Boilers (H-7 and H-8)

The Cashin Report noted three locations at Camp Hero which contained what appeared to be old boilers (1998): H-7, H-8, and H-9. The RI WP proposed a visual survey to determine whether boilers still exist. If the boilers were present, one surface soil sample (0–1 ft bgs) was to be collected. If stained soils were noted or if field screening of the surface soil samples with the PID (in the plastic, re-sealable bag) indicated the presence of petroleum during the survey, one Geoprobe® boring was to be advanced for the collection of two subsurface soil samples and one grab groundwater sample.

Phase I Field Operations: An extensive visual and magnetometer survey was conducted by the project team; however, the team was unable to locate debris noted by previous Cashin Report at AOC H-7 and H-8 after multiple attempts. As such, sampling activities were not completed at these AOCs.

Deviations from the RI WP: None.

4.31 Possible Boiler (H-9)

The third boiler noted in the Cashin Report, H-9, was confirmed present during visual survey during the initial project site walk (Cashin, 1998).

Phase I Field Operations: A visual survey was conducted and confirmed that the boiler at location H-9 still existed in June 2016. One surface soil sample (H9-SS01) was collected from 0 to 1 ft bgs for laboratory analysis of PAHs and metals. Field screening of the surface soil sample with the PID (in the plastic, re-sealable bag) was conducted; no readings above 0.0 ppm were observed. Because stained soils were not observed and field screening did not indicate elevated PID readings, borings were not completed in accordance with the RI WP. The Phase I sampling location at H-9 is shown on **Figure 4-26**.

Deviations from the RI WP: None.

4.32 Former Power Plant (H-11)

The Cashin Report recommended investigation potential petroleum, metals, and PCBs in soil and groundwater associated with the former power plant. In an August 2000 environmental assessment,

five groundwater, two surficial soil, two subsurface soil, and two sediment samples were collected and analyzed for PCBs, SVOCs, and metals (Weston 2000).

At that time, the former Power Plant location contained three to five feet of fill material, consisting mostly of charcoal. PCBs were not detected in soils or groundwater from the area. Beryllium was detected above the regulatory criteria in one subsurface soil (SS-1) and chromium and lead were detected at concentrations that slightly exceeded screening criteria in one of five groundwater sample locations (GW-2). The levels of chromium and lead were somewhat elevated in relation to the reference well located up-gradient of the former Power Plant location. Results from surface water and sediment samples indicated no evidence of contaminant transport pathways from the buildings to adjacent sensitive environmental areas, such as forested wetlands and streams (Weston 2000).

Additional investigation of the power plant was included in the Phase I investigation to confirm the Weston results (Weston 2000).

Phase I Field Operations: Two Geoprobe[®] borings (H11-SB01 and -SB02) were advanced to 10 ft bgs (just past the depth of water) within the footprint of the former Power Plant Building. The soil cores were screened with a PID; there were not any readings detected at location H11-SB01, but elevated PID readings (21.7 ppm maximum) were observed 3 to 5 ft bgs at location H11-SB02. Two soil samples were obtained from each boring, one surface soil sample from 0 to 1 ft bgs interval and one subsurface soil sample from 3 to 4 ft bgs, just above the perched groundwater-soil interface or in the interval with elevated PID readings.

A temporary well was installed in each boring and a grab groundwater samples were collected. Soil and groundwater samples were submitted for laboratory analysis of PAHs, PCBs, and metals. Phase I sampling locations for the former power plant are shown on **Figure 4-27**.

Note that two Geoprobe[®] borings were also conducted in the tile drain field associated with the former Power Plant Building as part of the site-wide abandoned sanitary sewer investigation and are discussed under that AOC. Those results will be incorporated into approach for this AOC.

Deviations from the RI WP: None.

4.33 Sewage Ejector Station (H-12)

The sewage ejector station, located near the former heating plant, was noted in the Cashin Report as a potential concern due to waste handling.

Phase I Field Operations: One Geoprobe[®] boring (H12-SB01) was advanced to 10 ft bgs within the footprint of the former ejector station. The soil core was screened with a PID and there were

not any readings above 0.1 ppm recorded. Two soil samples were collected: one surface soil sample from 0 to 1 ft bgs and one subsurface soil sample from 4 to 5 ft bgs, just above the soil-water interface. A temporary well was placed in the boring and a grab groundwater sample was collected. Soil and groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for the Sewage Ejector Station are shown on **Figure 4-28**.

Deviations from the RI WP: None.

4.34 Former Coal Storage (H-14)

Two former coal storage areas were identified in the Cashin Report and on archive drawings obtained during the 2016 historical records search (H-14 and H-15).

Phase I Field Operations: Three Geoprobe[®] borings (H14-SB01 through -SB03) were advanced within the suspected area of the H-14 coal storage area. The soil cores were screened with a PID and there were not any readings above 0.0 ppm recorded. Two soil samples were obtained from each boring: one surface soil sample from 0 to 1 ft bgs and one subsurface soil sample just above the soil-water interface or at the depth of the boring, if not water was encountered.

Temporary wells were placed in all three boring locations; grab groundwater samples were collected from H14-SB01 and -SB03. H14-SB02 was dry upon gauging and a groundwater sample could not be collected. Soil and groundwater samples were submitted for laboratory analysis of PAHs and metals. Phase I sampling locations for H-14 are shown on **Figure 4-29**.

Deviations from the RI WP: None.

4.35 Former Coal Storage (H-15)

Two former coal storage areas were identified in the Cashin Report and on archive drawings obtained during the 2016 historical records search (H-14 and H-15).

Phase I Field Operations: Three Geoprobe[®] borings (H15-SB01 through -SB03) were advanced within the suspected area of the H-15 coal storage area. The soil cores were screened with a PID and there were not any readings above 0.0 ppm recorded. Groundwater was not encountered in the borings. Two soil samples were obtained from each boring: one surface soil sample from 0 to 1 ft bgs and one subsurface soil sample just above where moisture was encountered or at the depth of the boring. Soil samples were submitted for laboratory analysis of PAHs and metals. Phase I sampling locations for H-15 are shown on **Figure 4-30**.

Deviations from the RI WP: Temporary wells were placed in all three boring locations; however, all three wells were dry upon gauging and groundwater samples could not be collected despite multiple attempts.

4.36 Former Sewage Treatment Area (H-16)

The Cashin Report reported a sewage treatment area just east of the Motor Pool. Historic site drawings indicated a proposed sewage treatment plant in this area; however, the available documentation was incomplete and the RI WP recommended additional investigation.

Phase I Field Operations: A walk-over survey was conducted to attempt to identify the status and size of former sewage treatment area at this location; however, no indicators were present other than some mounding. One Geoprobe® boring was advanced to the perched groundwater table in the former sewage treatment area. The soil core was screened with a PID and there were not any readings above 0.0 ppm that were recorded. Two soil samples were obtained the boring: one surface soil sample from 0 to 1 ft bgs interval and one subsurface soil sample from 4 to 5 ft bgs, just above the groundwater-soil interface.

A temporary well was placed in the boring and a grab groundwater sample was collected. Soil and groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, and metals. The Phase I sampling location for H-16 is shown on **Figure 4-31**. Additionally, one boring location associated with the abandoned site-wide waste disposal system (WDS-SB11) was located within the H-16 area.

Deviations from the RI WP: Two borings were planned for H-16 in the RI WP; however, because one boring associated with the abandoned site-wide waste disposal system (WDS-SB11) was located within the H-16 area, one of the two H-16 borings was reallocated to former Building 34, a new AOC established during the Phase I field activities (see Section 4.23 for more details).

4.37 Open Pits (H-17)

The Cashin Report noted two open pit locations which may have been dumping areas (H-17 and H-21). Geospatial analysis of these areas by the USACE AGC were inconclusive (USACE 2016). Based on visual inspection of the areas, there have been ground disturbances; therefore, the goal of the Phase I investigation was to confirm or deny suspected waste related to DoD utilization of this area.

Phase I Field Operations: Three Geoprobe® borings (H17-SB01 through -SB03) were advanced in the vicinity of the ground disturbances at H-17, two topographically downgradient and one upgradient of the disturbance. During the initial attempt on each boring, groundwater was not encountered and the sandy lithology caused boreholes to collapse around 20 ft bgs. The team returned at a later date with steel casing and advanced borings to 35 ft bgs (greater than the 25 ft

bgs established in the RI WP), in attempt to reach groundwater. Two soil samples were obtained from each boring: one surface soil sample from 0 to 1 ft bgs interval and one subsurface soil sample from 4 to 5 ft bgs. Groundwater was encountered in two of the three borings; temporary wells were installed in those two borings (H17-SB02 and -SB03) and grab groundwater samples were collected. Soil and groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-17 are shown on **Figure 4-32**.

Deviations from the RI WP: As detailed above, one of the three planned groundwater samples was not obtained.

4.38 Drum Location (H-18)

During the Camp Hero FS (Cashin 1998), six locations were observed with one or two 55-gallon drums or drum remnants (H-1, H-2, H-3, H-18, H-20, and H-22).

Phase I Field Operations: A site survey was conducted to verify the number of drums present at H-18. Minimal drum remnants were present with no labeling or identification; liquid was not present in the drum remnants. Two co-located surface soil (0 to 1 ft bgs) and near-surface soil samples (1 to 2 ft bgs) were collected in the vicinity of the drum remnants for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-18 are shown on **Figure 4-33**.

Deviations from the RI WP: None.

4.39 AST 550-Gallon (H-19)

The Cashin Report noted one discarded 550-gallon above ground storage tank was located in the area of Camp Hero between Hill 72 and 83, in the northern section of the site (see **Figure 1-2**).

Phase I Field Operations: A walk-over survey was conducted and confirmed that the 550-gallon AST still exists at Camp Hero. Liquid was not present in the tank. Two surface soil samples (H19-SS01 and -SS02) were collected from 0 to 1 ft bgs adjacent to the tank for analysis of VOCs, PAHs, and metals. The soils were screened with a PID and there were not any readings above 0.0 ppm that were recorded. Because there were not any elevated PID readings or petroleum-stained soils observed, Geoprobe® borings were not conducted. Phase I sampling locations at H-19 are shown on **Figure 4-34**.

Deviations from the RI WP: None.

4.40 Drum Location (H-20)

During the Camp Hero FS (Cashin 1998), six locations were observed with one or two 55-gallon drums or drum remnants (H-1, H-2, H-3, H-18, H-20, and H-22).

Phase I Field Operations: A site survey was conducted to verify the number of drums present at H-20. One drum was present, with no labeling or identification, located inside the wooden revetment (as described above in Section 4.23). Liquid was not present in the drum. Two co-located surface soil (0 to 1 ft bgs) and near-surface soil samples (1 to 2 ft bgs) were collected from underneath the drum within the revetment for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-20 are shown on **Figure 4-35**. Photographs of the sampling at H-20 are located in the Photograph Log (H-20).

Deviations from the RI WP: None.

4.41 Open Pits (H-21)

The Cashin Report noted two open pit locations which may have been dumping areas (H-17 and H-21). Geospatial analysis of these areas by the USACE AGC were inconclusive (USACE 2016). Based on visual inspection of the areas, there have been ground disturbances; therefore, the goal of the Phase I investigation was to confirm or deny suspected waste related to DoD utilization of this area.

Phase I Field Operations: Three Geoprobe® borings (H21-SB01 through -SB03) were advanced to 15 ft bgs in the vicinity of the ground disturbances. Two soil samples were obtained from each boring: one surface soil sample from 0 to 1 ft bgs interval and one subsurface soil sample at varying depths. Temporary wells were installed in the borings and grab groundwater samples were collected. Soil and groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-21 are shown on **Figure 4-36**.

Deviations from the RI WP: None.

4.42 Drum Location (H-22)

During the Camp Hero FS (Cashin 1998), six locations were observed with one or two 55-gallon drums or drum remnants (H-1, H-2, H-3, H-18, H-20, and H-22).

Phase I Field Operations: A site survey was conducted to verify the number of drums present at H-22. One drum was present with no labeling or identification. Liquid was not present in the drum. Two co-located surface soil (0 to 1 ft bgs) and near-surface soil samples (1 to 2 ft bgs) were collected from underneath the drum for analysis of the SW-846 list of analytes for VOCs, SVOCs, PCBs, and metals. Phase I sampling locations for H-22 are shown on **Figure 4-37**.

Deviations from the RI WP: None.

4.43 AGC Sites 1, 2, and 4

As part of this investigation, the Hydrologic and Environmental Analysis Branch of the Warfighter Support Directorate of the USACE ACG was tasked to search, collect, and review historical aerial

photography from 1940 to 1982 searching for features associated with dumps within the former Camp Hero boundary. Their report concluded that there was no photographic evidence of debris accumulation suggestive of a dump in the years collected within the timeframe of this project. However, four areas were identified where dumping could have taken place, described as access points to cleared areas near or along the bluff (USACE 2016). The four areas were designated "AGC Sites 1, 2, 3, and 4" for this RI. AGC Site 3 corresponds to the "Camp Hero State Park Bluffs" AOC, which was already established as a part of this investigation (see below).

Phase I Field Operations: To investigate potential buried debris, a visual inspection and screening-level geophysical survey using a metal detector were conducted during Phase I field activities. Visual and magnetometer results did not identify any subsurface anomalies indicative of waste dumping. As such, borings were not advanced at this AOC.

Deviations from the RI WP: None.

4.44 Camp Hero State Park Bluffs/AGC Site 3

A boiler or small tank and metal debris was observed at the bottom of the steep slope along the southern bluffs of Camp Hero during the Site Walk conducted in October 2015. Additionally, the USACE AGC identified this location as an area where dumping could have taken place. Based on a previous walk-over survey, it was concluded that the miscellaneous metal debris was inert and did not previously contain liquid contents.

Phase I Field Operations: The boiler was removed from the bluffs and disposed of as solid waste.

Deviations from the RI WP: None.

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Attachment A

Figures

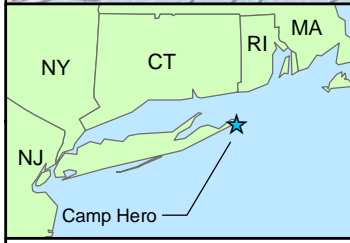
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- Figure 4-11 Building 22 (Tank B) Phase I RI Sampling Locations**
- Figure 4-12 Line A Abandoned Waste Disposal Systems Phase I RI Sampling Locations**
- Figure 4-13 Line C Abandoned Waste Disposal Systems Phase I RI Sampling Locations**
- Figure 4-14 Line D Abandoned Waste Disposal Systems Phase I RI Sampling Locations**
- Figure 4-15 Line E Abandoned Waste Disposal Systems Phase I RI Sampling Locations**
- Figure 4-16 Line F Abandoned Waste Disposal Systems Phase I RI Sampling Locations**
- Figure 4-17 Motor Pool Phase I RI Sampling Locations**
- Figure 4-18 Engineering Field Office Phase I RI Sampling Locations**
- Figure 4-19 Former Building 34 Phase I RI Sampling Locations**
- Figure 4-20 H-1 Phase I RI Sampling Locations**
- Figure 4-21 H-2 Phase I RI Sampling Locations**
- Figure 4-22 H-3 Phase I RI Sampling Locations**
- Figure 4-23 H-4 Phase I RI Sampling Locations**
- Figure 4-24 H-5 Phase I RI Sampling Locations**
- Figure 4-25 H-6 Phase I RI Sampling Locations**
- Figure 4-26 H-9 Phase I RI Sampling Locations**
- Figure 4-27 H-11 Phase I RI Sampling Locations**

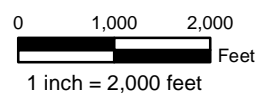
Figure 4-28 H-12 Phase I RI Sampling Locations
Figure 4-29 H-14 Phase I RI Sampling Locations
Figure 4-30 H-15 Phase I RI Sampling Locations
Figure 4-31 H-16 Phase I RI Sampling Locations
Figure 4-32 H-17 Phase I RI Sampling Locations
Figure 4-33 H-18 Phase I RI Sampling Locations
Figure 4-34 H-19 Phase I RI Sampling Locations
Figure 4-35 H-20 Phase I RI Sampling Locations
Figure 4-36 H-21 Phase I RI Sampling Locations
Figure 4-37 H-22 Phase I RI Sampling Locations



NAD 1983 StatePlane Long Island FIPS 3104
 Basemap Copyright © 2013 National Geographic Society, i-cubed



MAP LOCATION

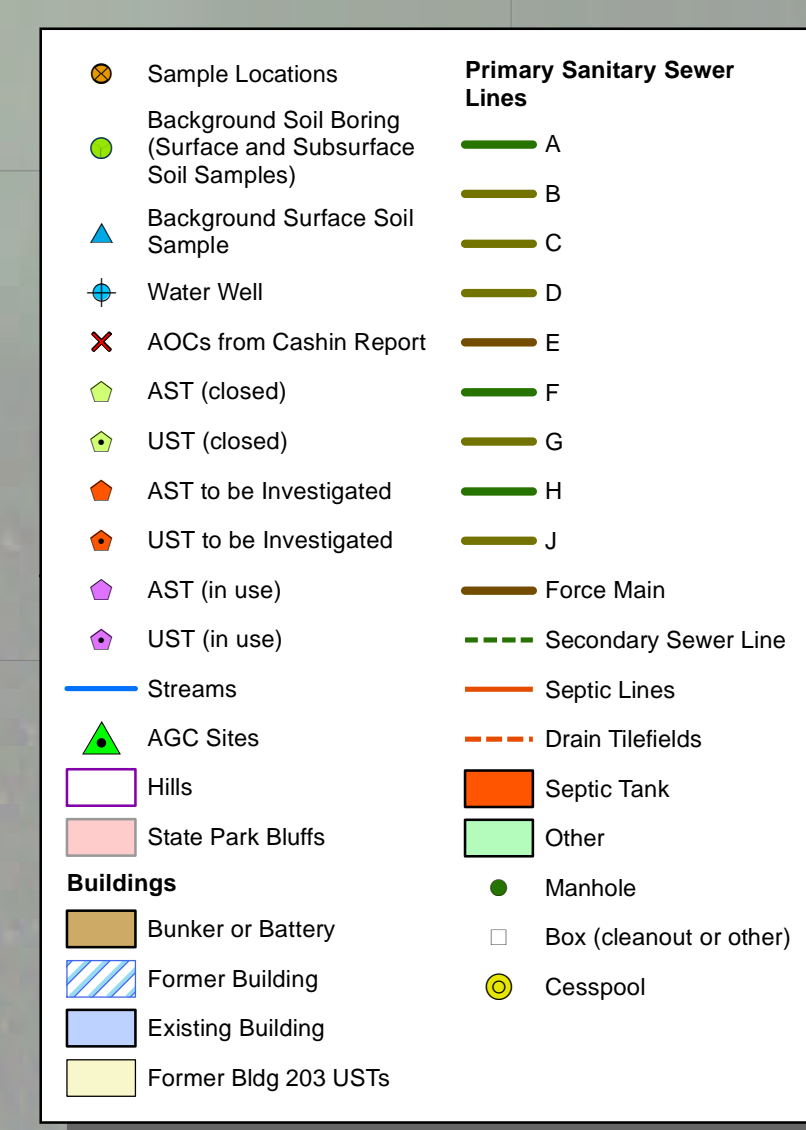
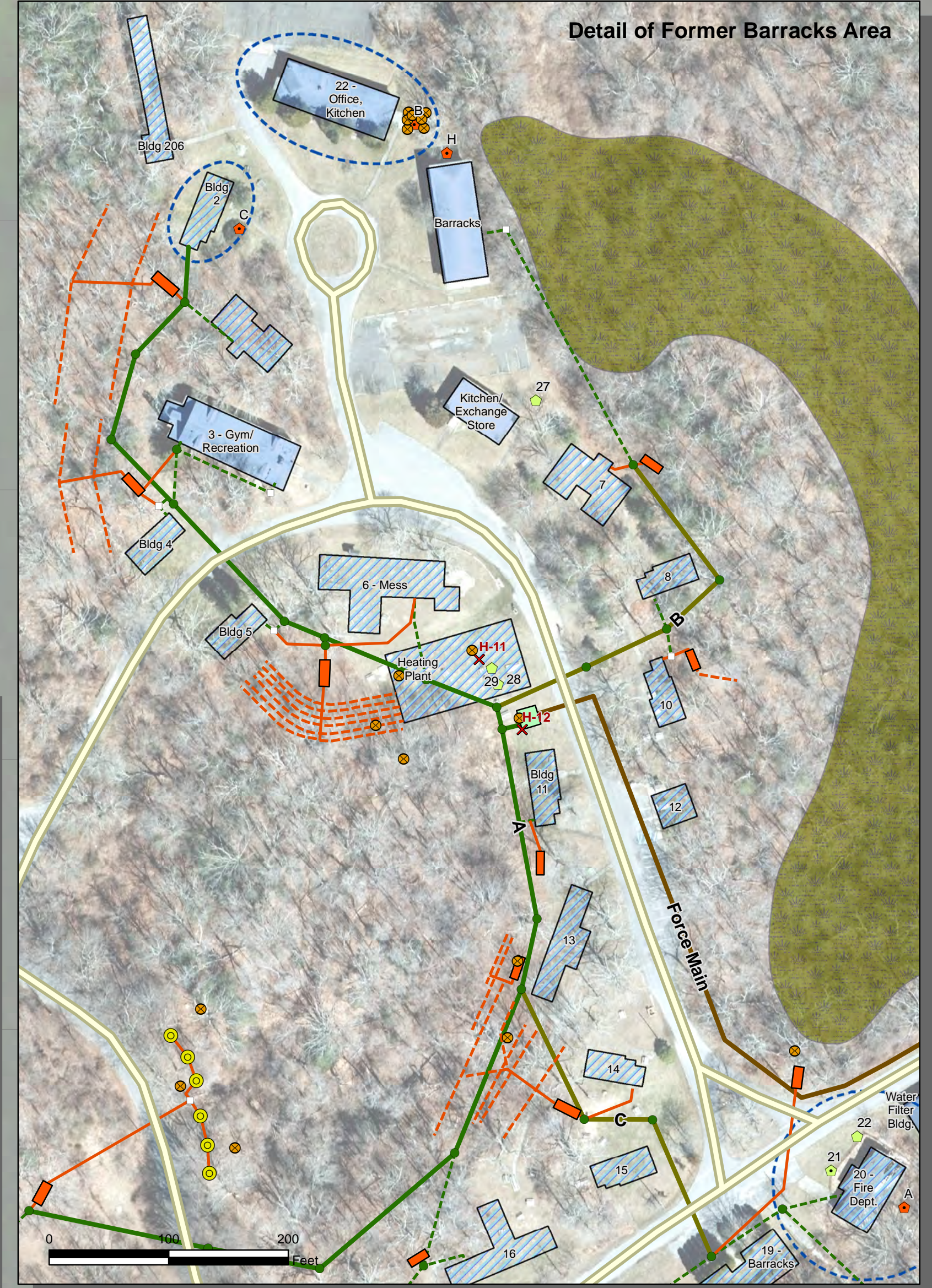
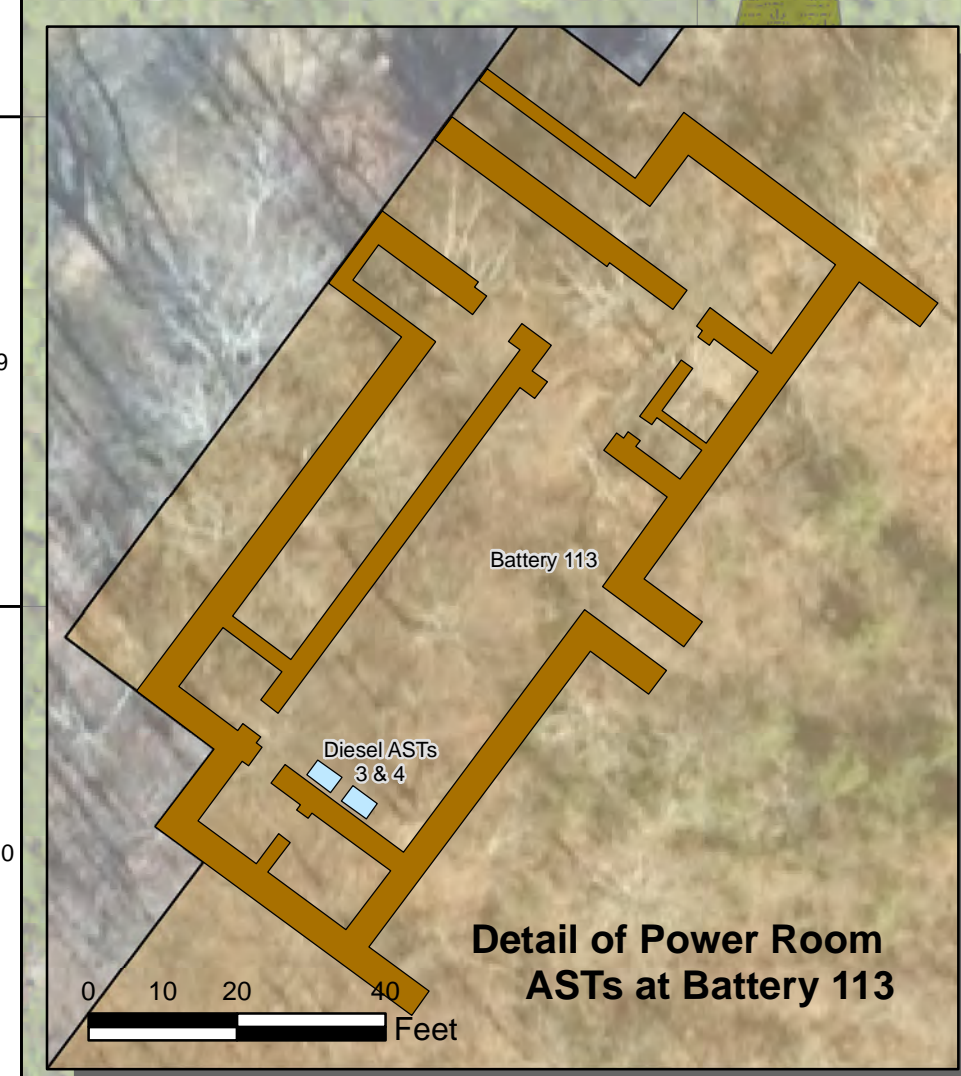


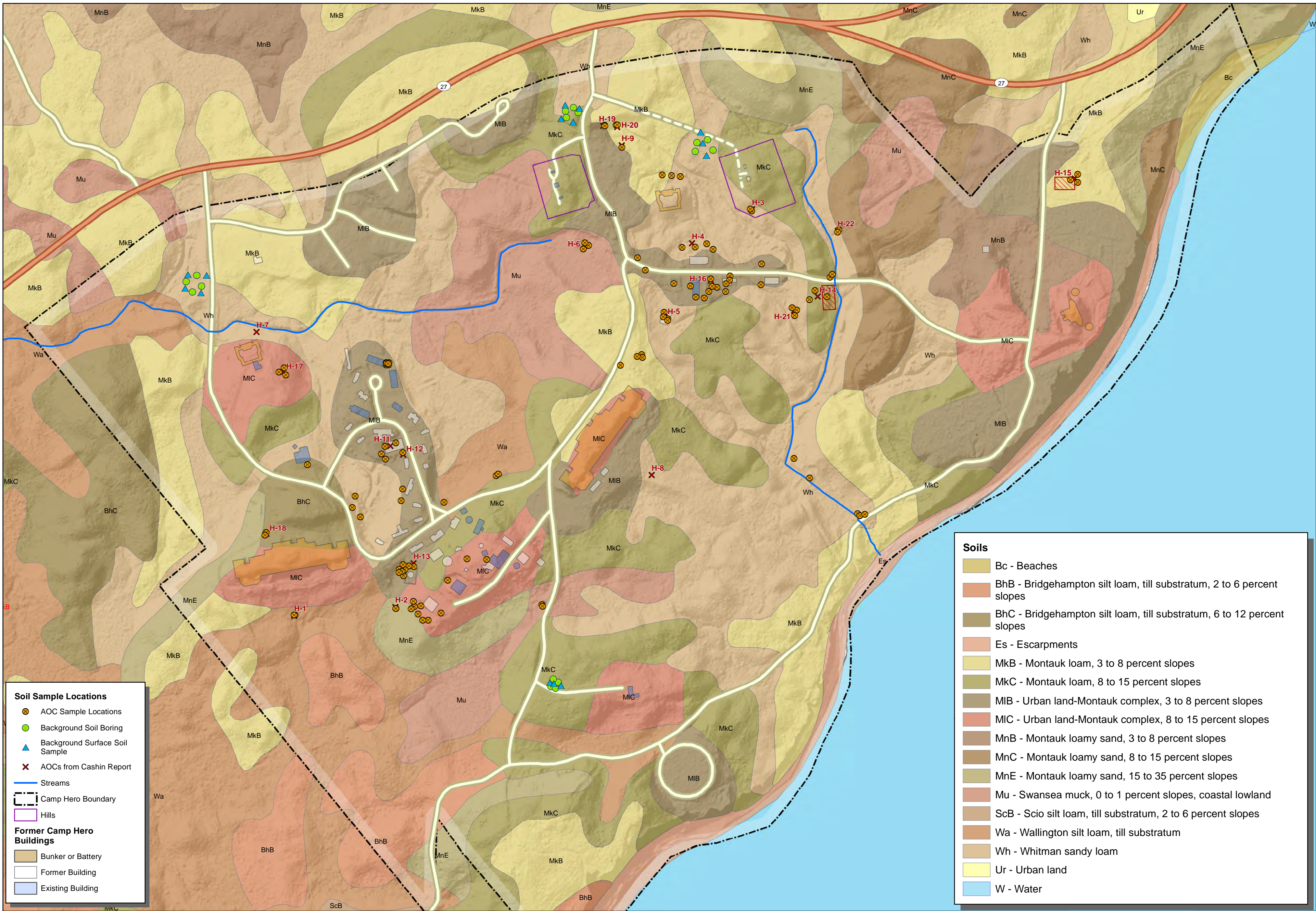
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General Location Map

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 1-1
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Soil Sample Locations

- AOC Sample Locations
- Background Soil Boring
- ▲ Background Surface Soil Sample
- ✕ AOCs from Cashin Report

— Streams

--- Camp Hero Boundary

▭ Hills

Former Camp Hero Buildings

- Bunker or Battery
- Former Building
- Existing Building

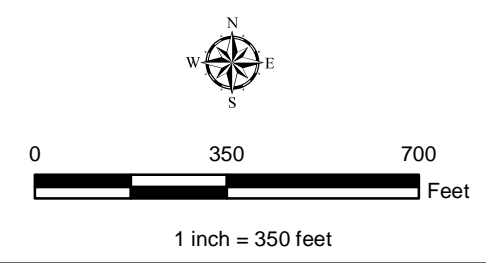
Soils

- Bc - Beaches
- BhB - Bridgehampton silt loam, till substratum, 2 to 6 percent slopes
- BhC - Bridgehampton silt loam, till substratum, 6 to 12 percent slopes
- Es - Escarpments
- MkB - Montauk loam, 3 to 8 percent slopes
- MkC - Montauk loam, 8 to 15 percent slopes
- MIB - Urban land-Montauk complex, 3 to 8 percent slopes
- MIC - Urban land-Montauk complex, 8 to 15 percent slopes
- MnB - Montauk loamy sand, 3 to 8 percent slopes
- MnC - Montauk loamy sand, 8 to 15 percent slopes
- MnE - Montauk loamy sand, 15 to 35 percent slopes
- Mu - Swansea muck, 0 to 1 percent slopes, coastal lowland
- ScB - Scio silt loam, till substratum, 2 to 6 percent slopes
- Wa - Wallington silt loam, till substratum
- Wh - Whitman sandy loam
- Ur - Urban land
- W - Water



Surface water features obtained from National Hydrography Dataset (NHD) Dates of publication vary.
 SSURGO Soils data obtained from U.S. Department of Agriculture, NRCS Service Center

Coordinate System: NAD 1983 StatePlane New York Long Island FIPS 3104 Feet
 Projection: Lambert Conformal Conic
 Datum: North American 1983

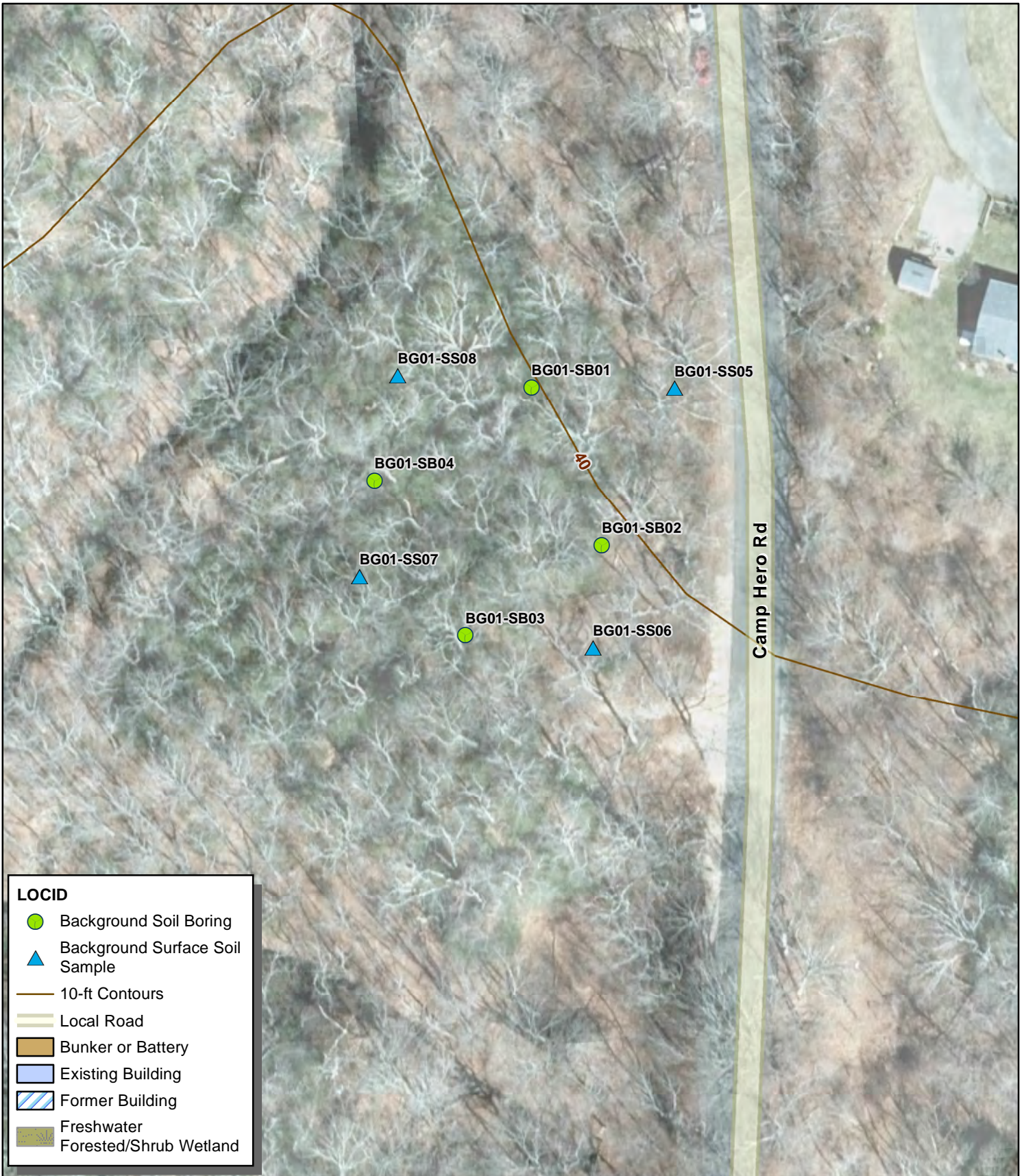


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Soil Survey Site Map

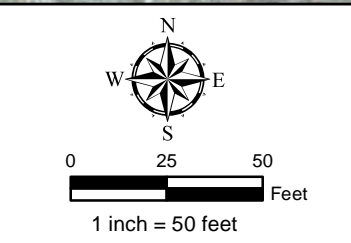
Camp Hero Phase 1 Field Investigation Report

PROJECT NO. 60443903	PREPARED BY DDS	DATE September 2016	Figure 3-1
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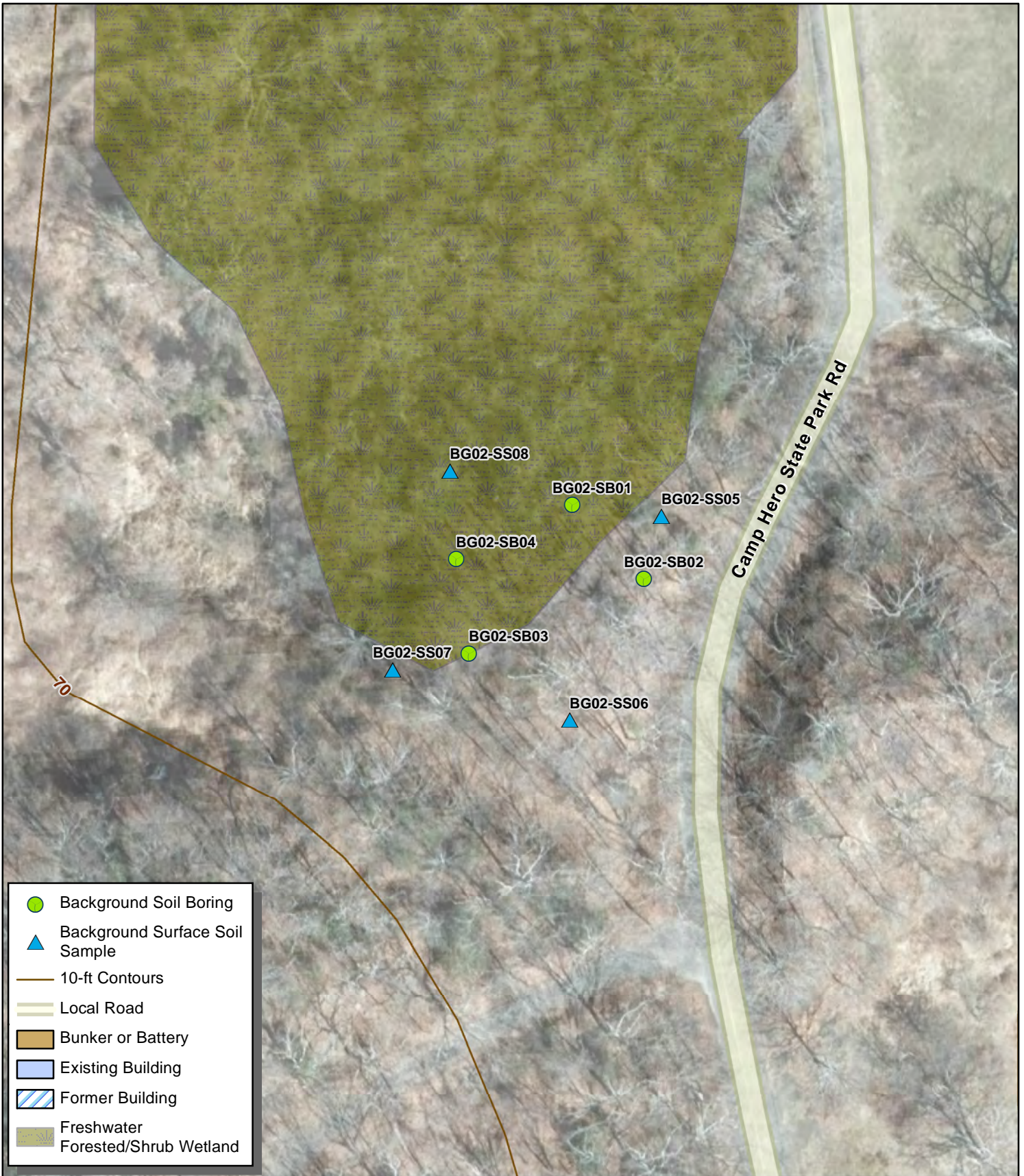


LOCID

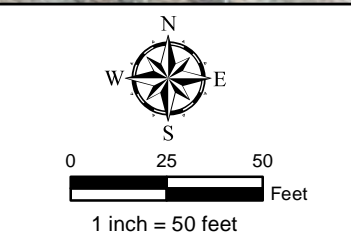
- Background Soil Boring
- ▲ Background Surface Soil Sample
- 10-ft Contours
- Local Road
- Bunker or Battery
- Existing Building
- ▨ Former Building
- Freshwater Forested/Shrub Wetland



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Background Area 01 Sampling Locations		
Camp Hero Phase I Field Investigation Report		
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016
		Figure 3-2



- Background Soil Boring
- ▲ Background Surface Soil Sample
- 10-ft Contours
- Local Road
- Bunker or Battery
- Existing Building
- ▨ Former Building
- Freshwater Forested/Shrub Wetland

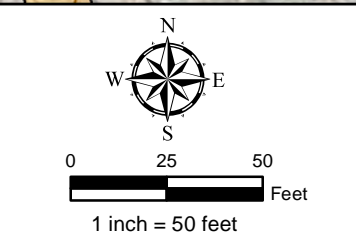
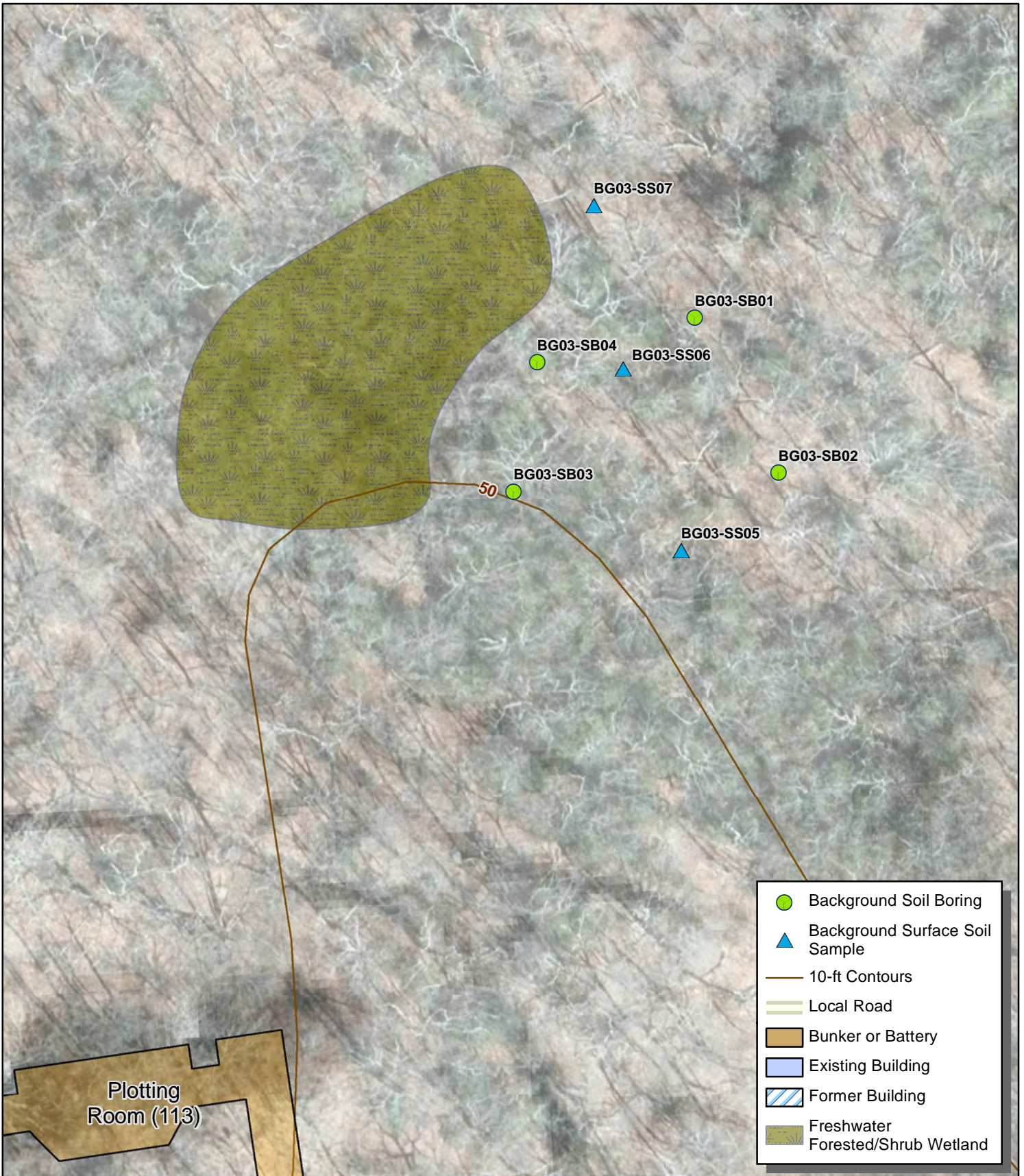


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Background Area 02 Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 3-3
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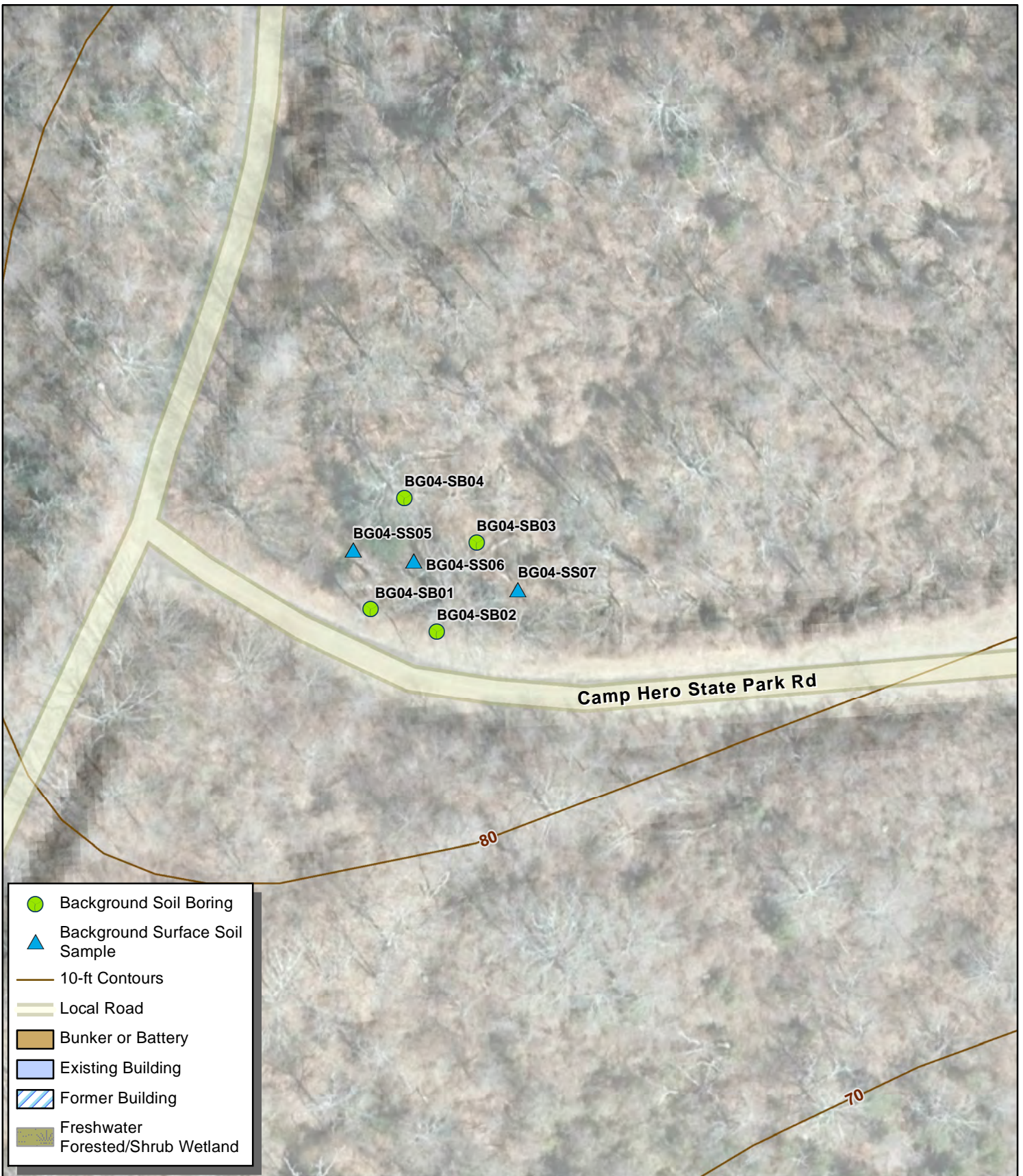


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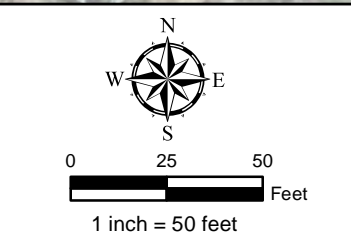
Background Area 03 Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 3-4
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- Background Soil Boring
- ▲ Background Surface Soil Sample
- 10-ft Contours
- Local Road
- Bunker or Battery
- Existing Building
- ▨ Former Building
- Freshwater Forested/Shrub Wetland

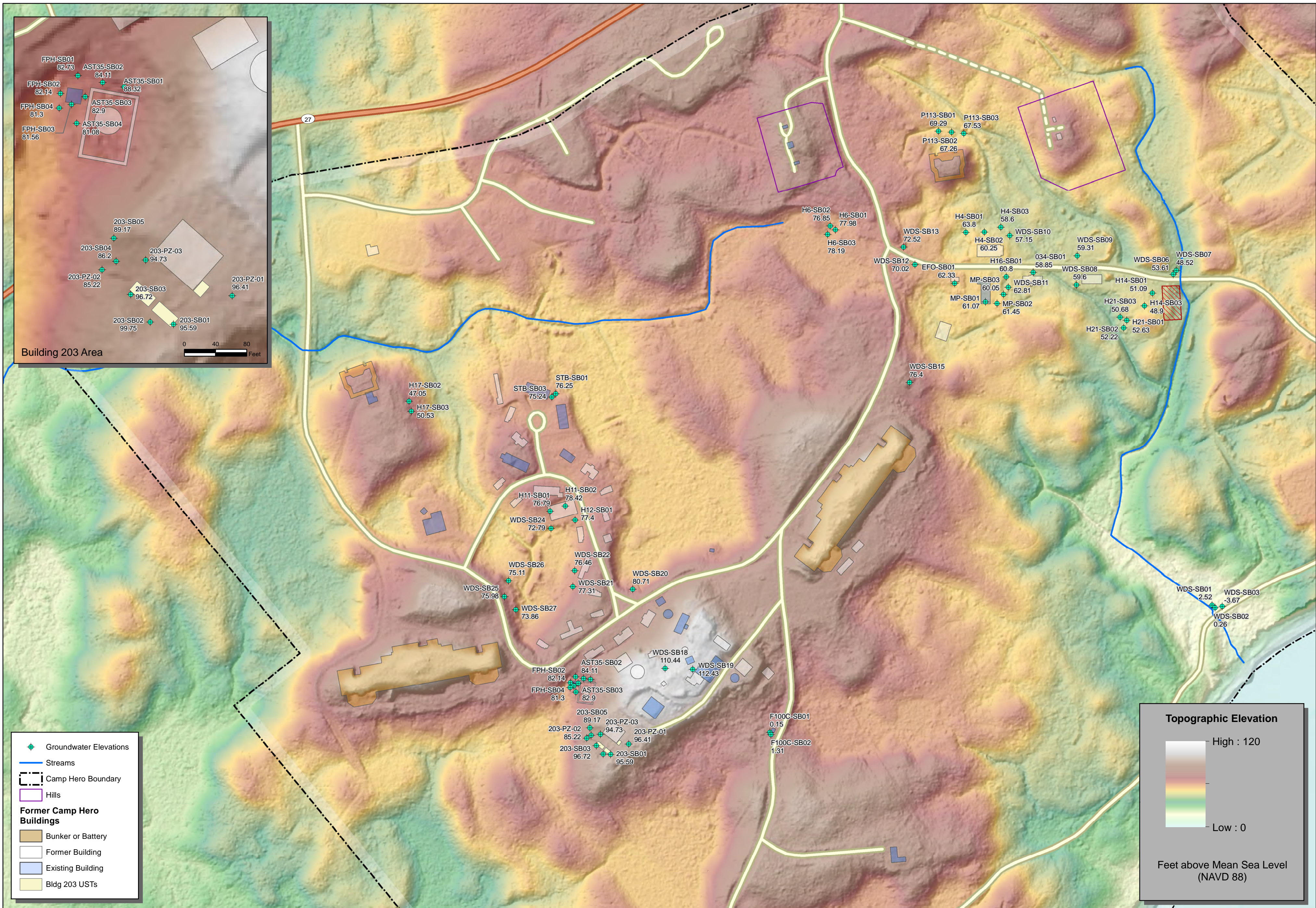


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Background Area 04 Sampling Locations

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◆ Groundwater Elevations
— Streams
 Camp Hero Boundary
 Hills
Former Camp Hero Buildings
 Bunker or Battery
 Former Building
 Existing Building
 Bldg 203 USTs

Topographic Elevation

High : 120

Low : 0

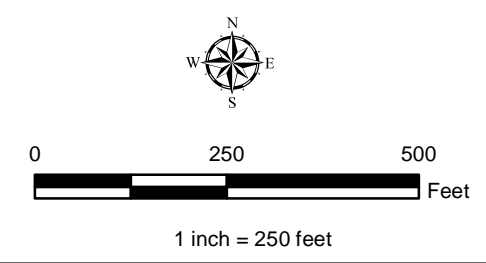
Feet above Mean Sea Level (NAVD 88)



Surface water features obtained from National Hydrography Dataset (NHD) Dates of publication vary.
 SSURGO Soils data obtained from U.S. Department of Agriculture, NRCS Service Center

Coordinate System: NAD 1983 StatePlane New York Long Island FIPS 3104 Feet
 Projection: Lambert Conformal Conic
 Datum: North American 1983

Hillshade Vertical Exaggeration = 3X

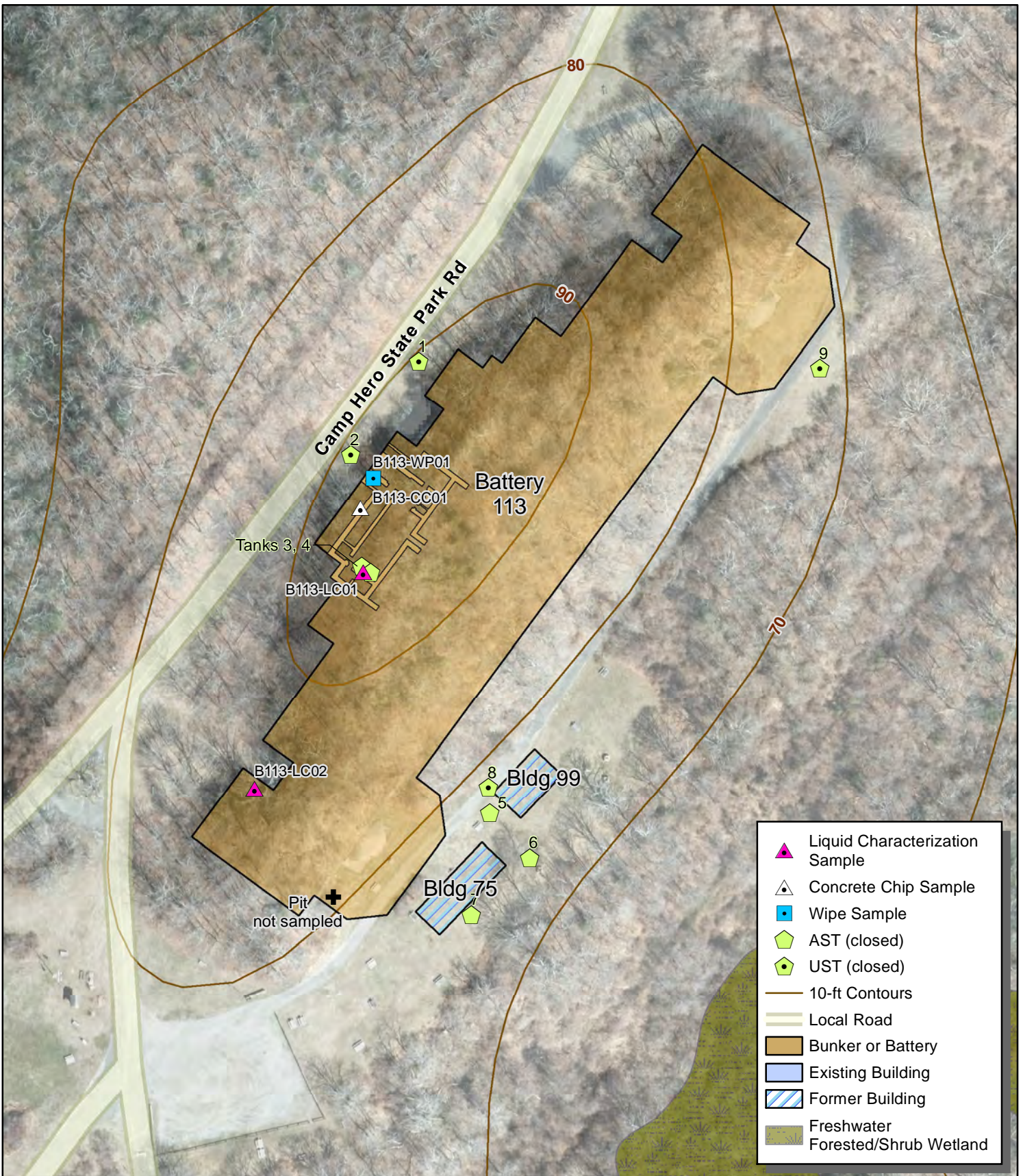


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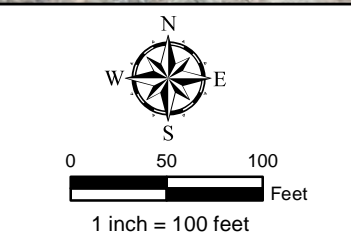
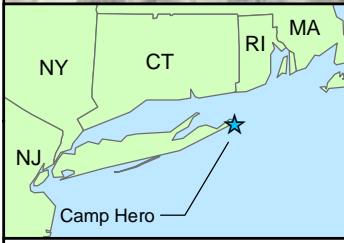
Camp Hero Potentiometric Map
 June 2016

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY DDS	DATE September 2016	Figure 4-1
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- Liquid Characterization Sample
- Concrete Chip Sample
- Wipe Sample
- AST (closed)
- UST (closed)
- 10-ft Contours
- Local Road
- Bunker or Battery
- Existing Building
- Former Building
- Freshwater Forested/Shrub Wetland

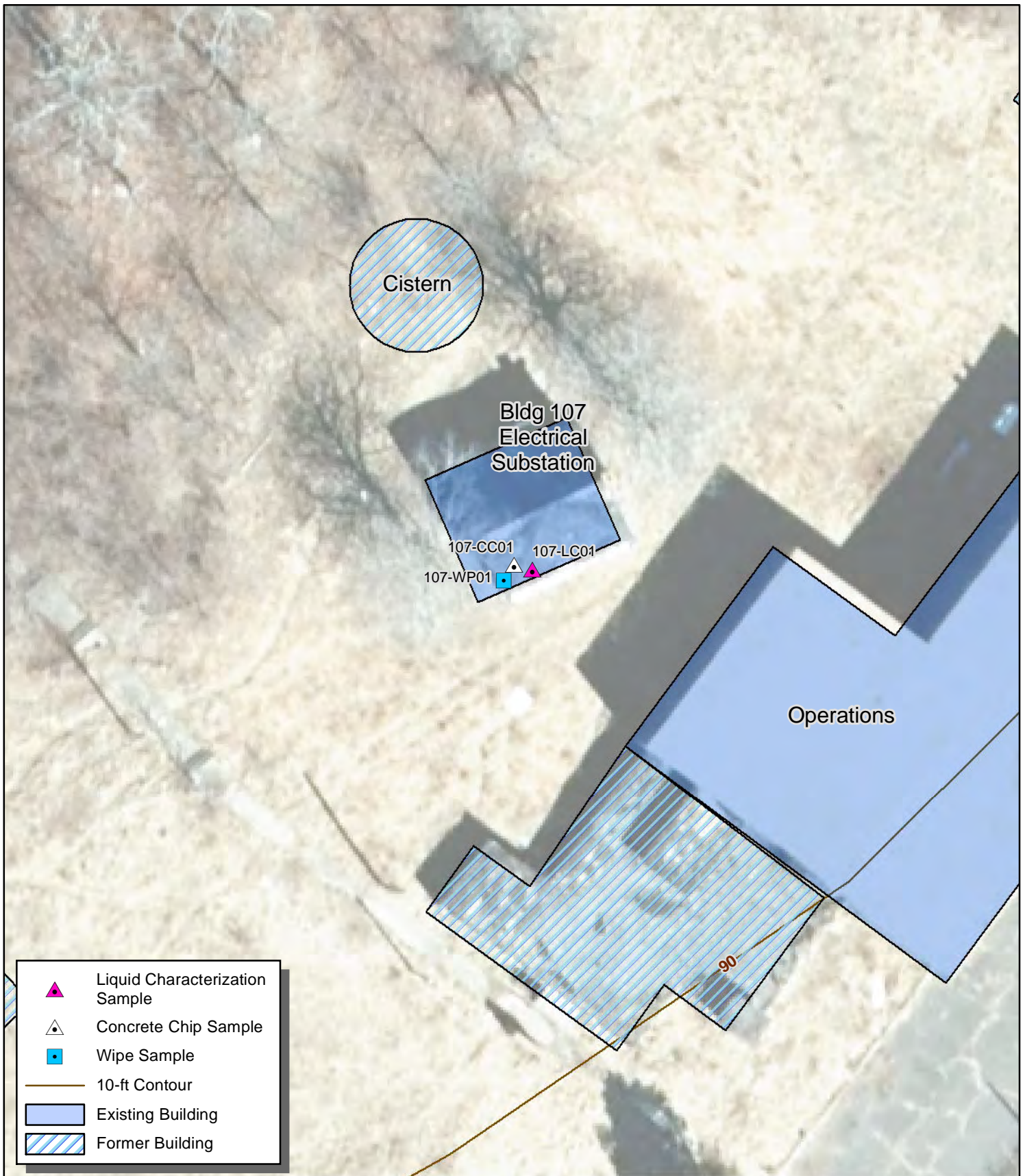








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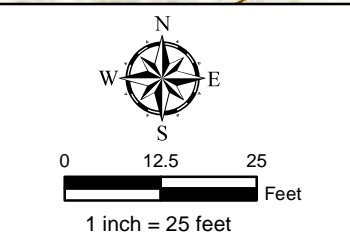
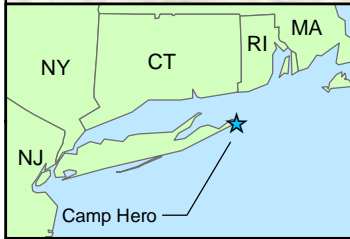
Battery 113 Phase 1 RI Sampling Locations


Camp Hero Phase I Field Investigation Report

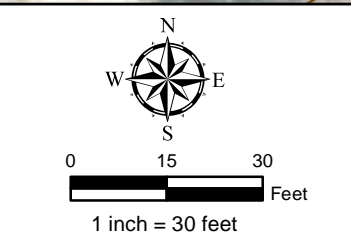
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-2
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-  Liquid Characterization Sample
-  Concrete Chip Sample
-  Wipe Sample
-  10-ft Contour
-  Existing Building
-  Former Building



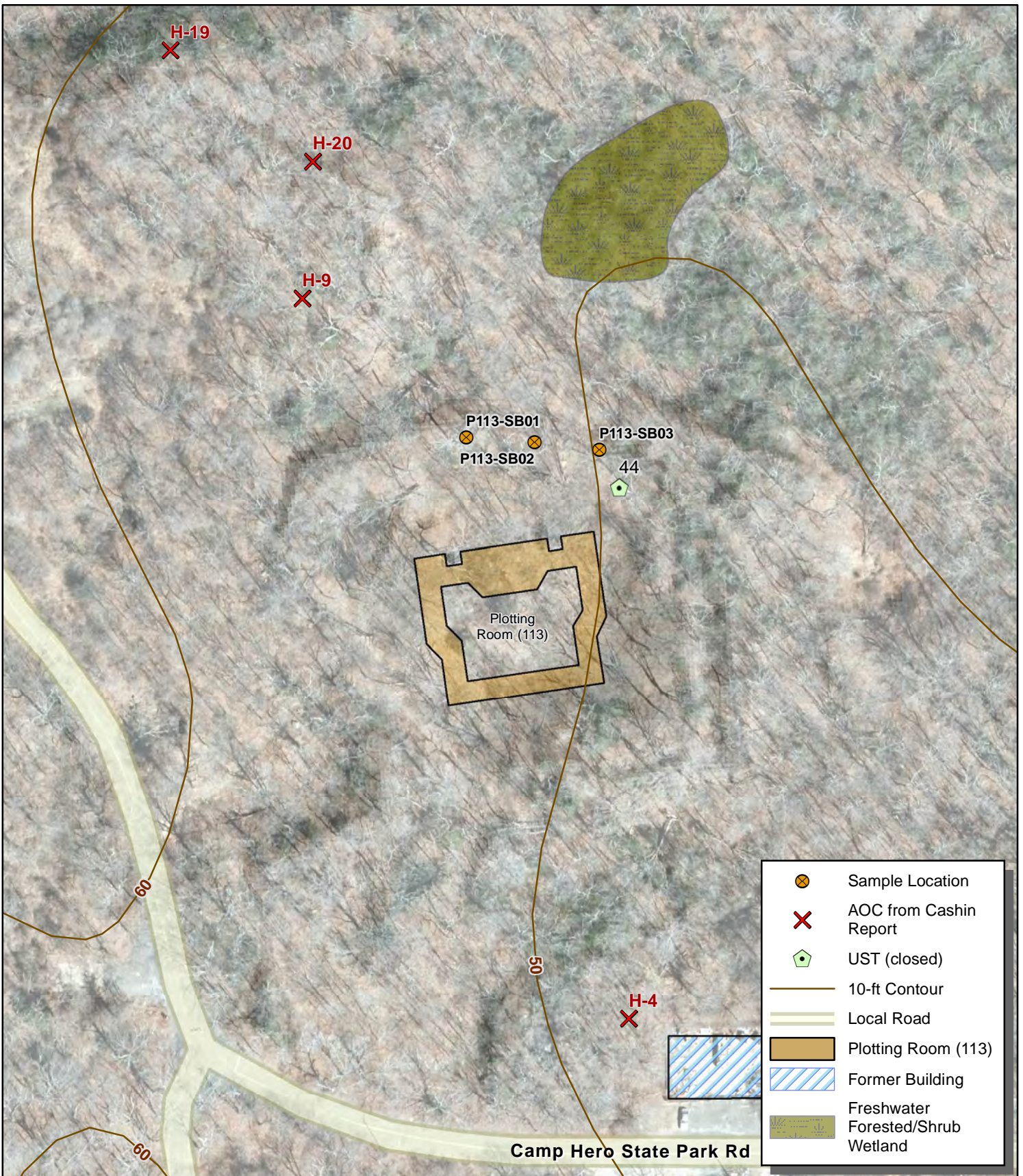
		3101 Wilson Blvd., Suite 900 Arlington, VA 22201 T 703-682-4900 F 703-682-4901
Building 107 Phase 1 RI Sampling Locations		
Camp Hero Phase I Field Investigation Report		
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016
		Figure 4-3



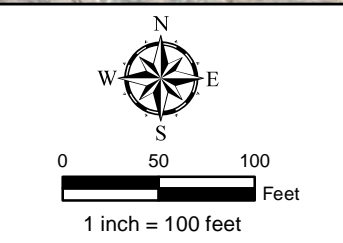
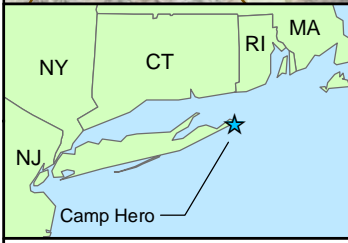
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Building 201
Phase 1 RI Sampling Locations
Camp Hero Phase I Field Investigation Report

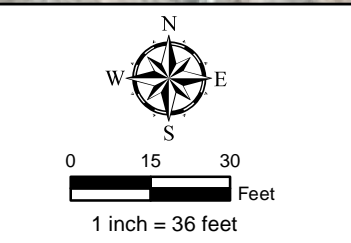
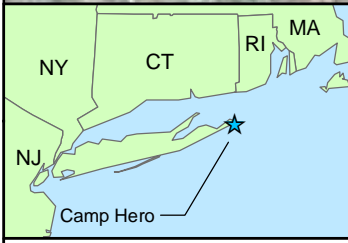
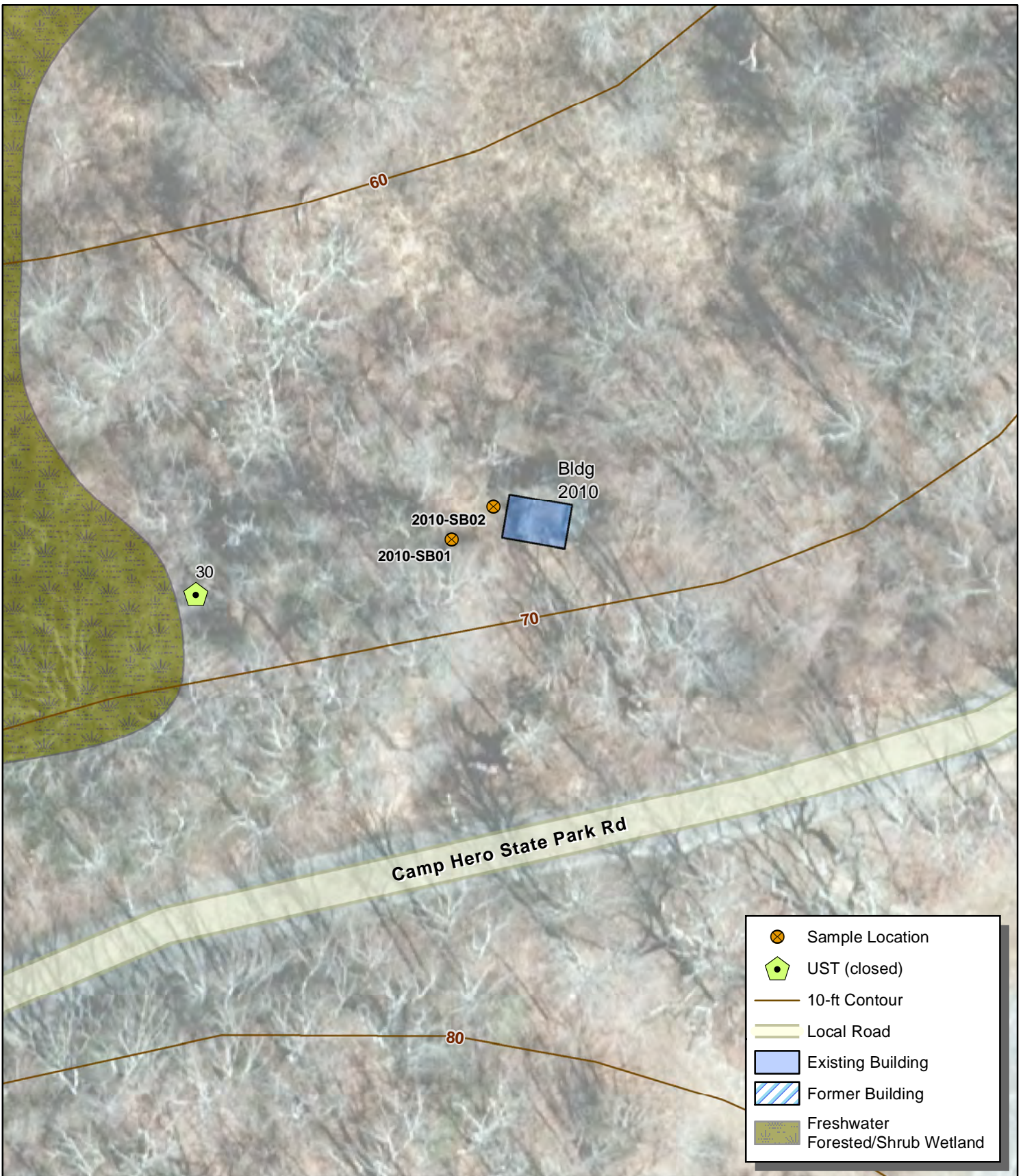
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-4
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- Sample Location
- AOC from Cashin Report
- UST (closed)
- 10-ft Contour
- Local Road
- Plotting Room (113)
- Former Building
- Freshwater Forested/Shrub Wetland



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Plotting Room 113 Phase 1 RI Sampling Locations			
Camp Hero Phase I Field Investigation Report			
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-5



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Building 2010 Phase 2 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO.
60443903

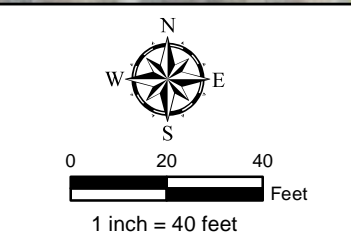
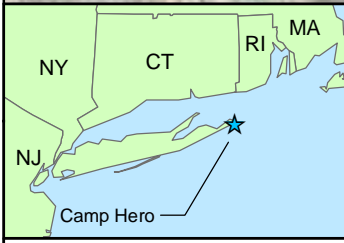
PREPARED BY:
DDS

DATE:
September 2016

Figure 4-6



Wetlands shapes from U. S. Fish and Wildlife Service. 2015. National Wetlands Inventory website. <http://www.fws.gov/wetlands/>

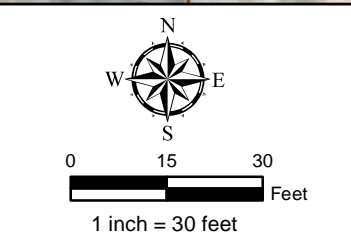
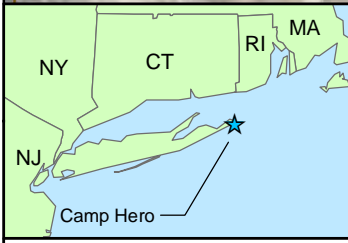
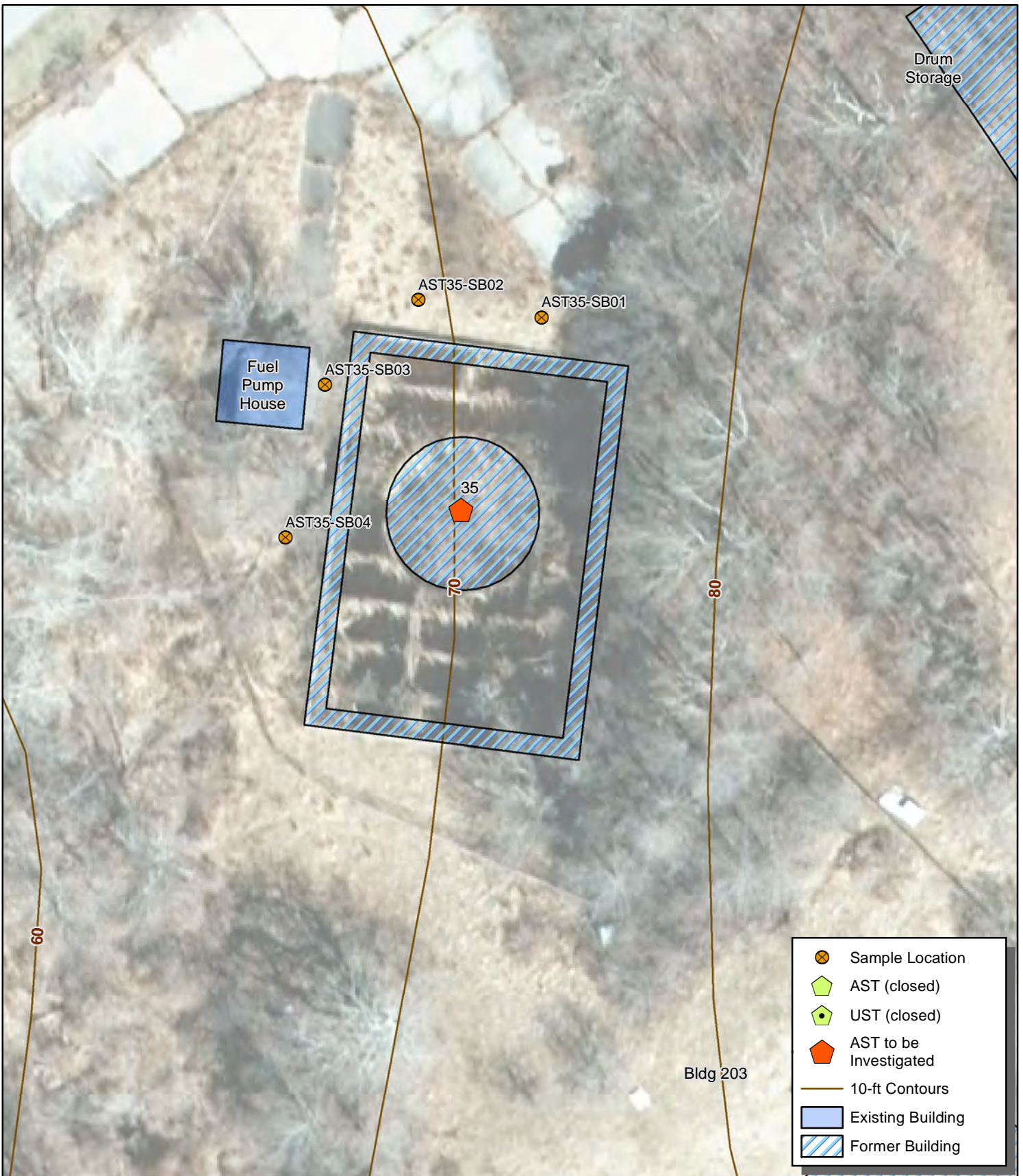


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Building F100C Phase 2 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

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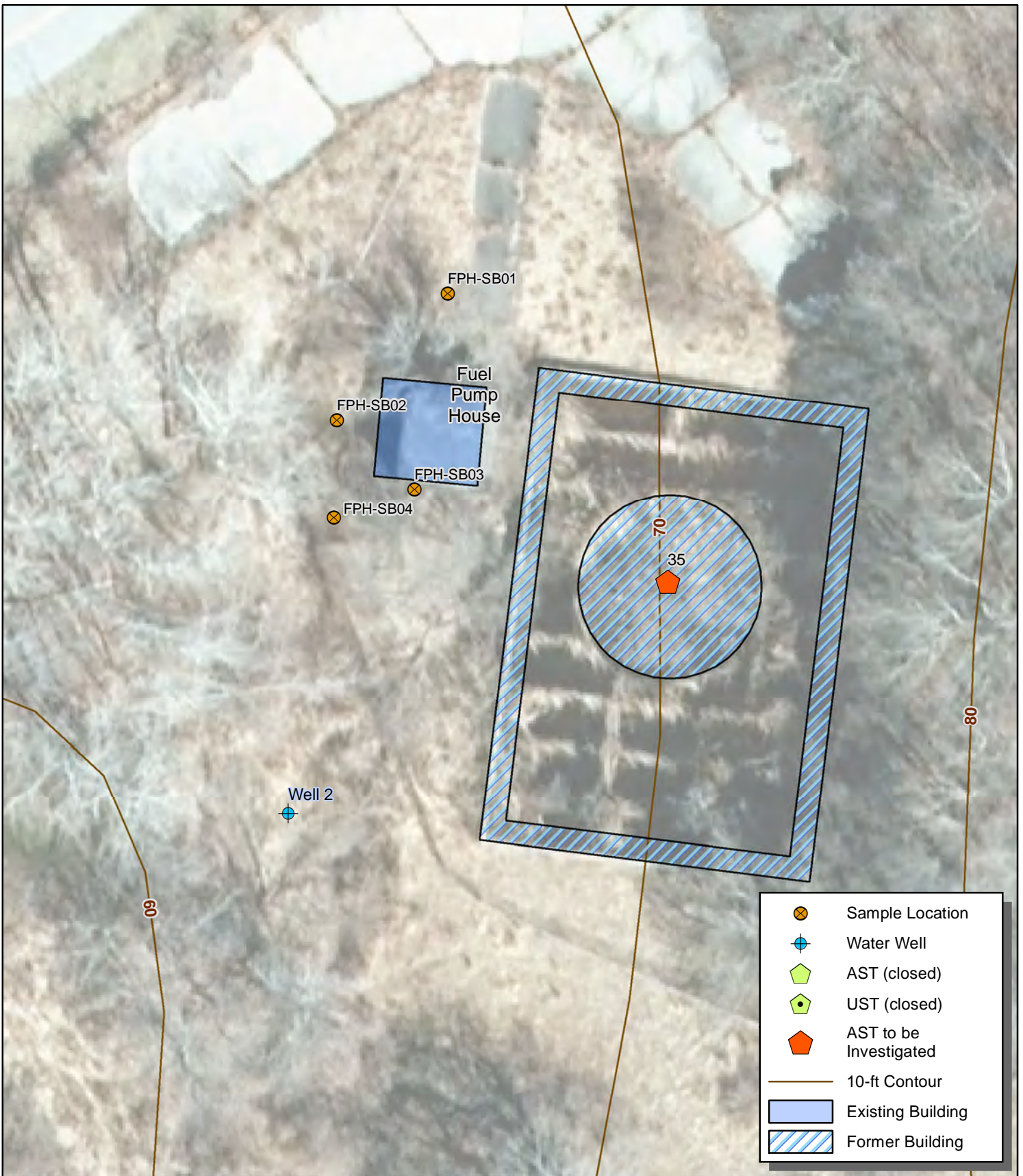
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AST-35 (H-13) Phase 1 RI Sampling Locations

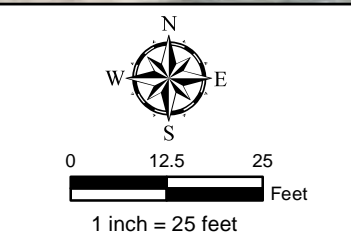
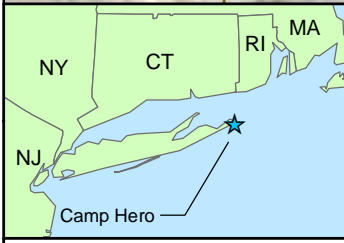
Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016
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Figure 4-8



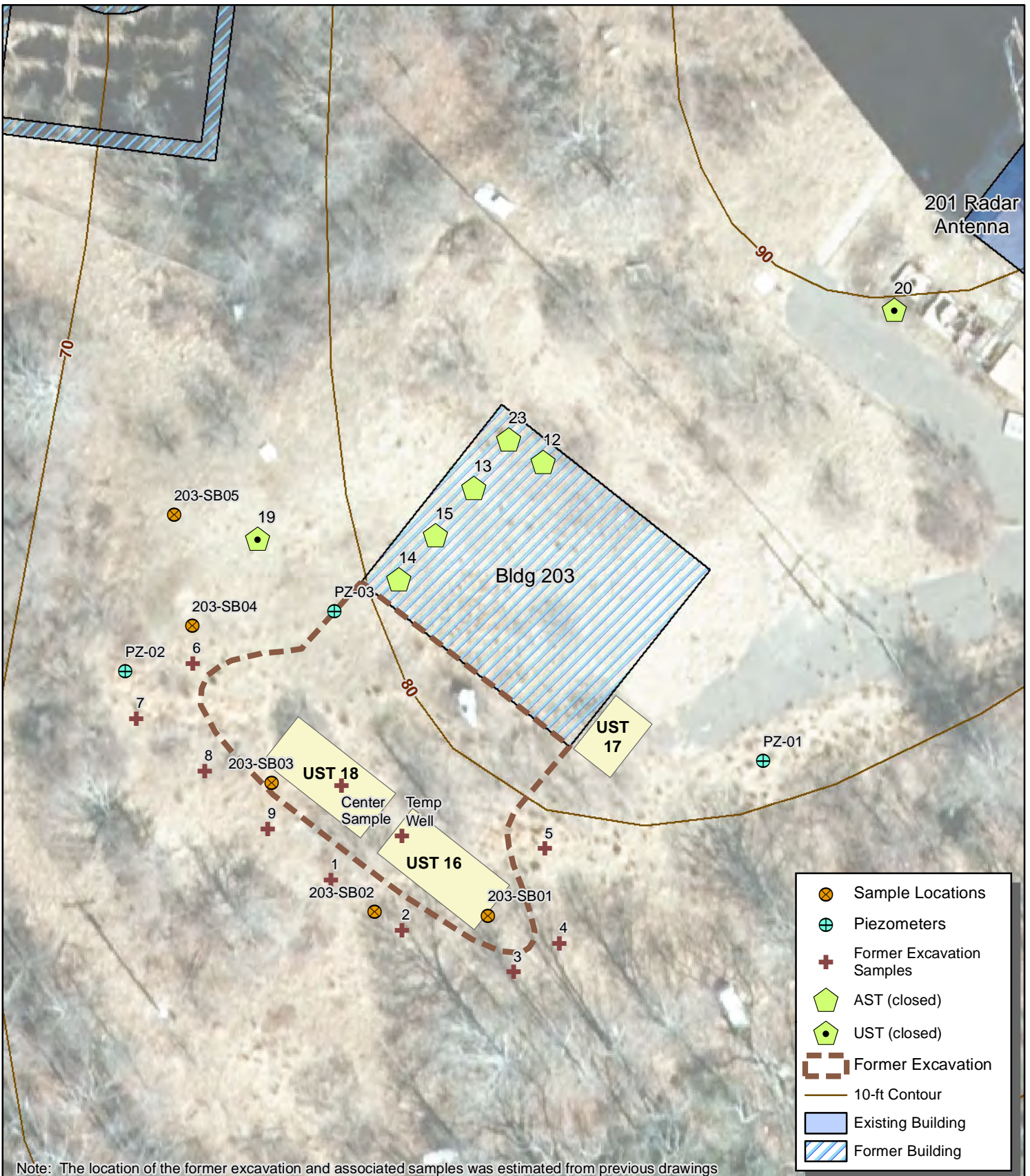
-  Sample Location
-  Water Well
-  AST (closed)
-  UST (closed)
-  AST to be Investigated
-  10-ft Contour
-  Existing Building
-  Former Building



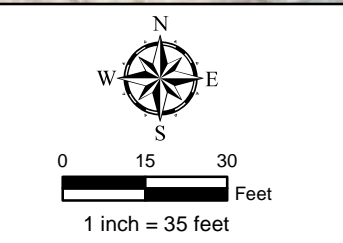
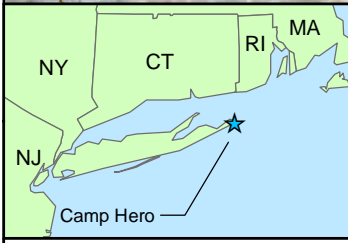
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**Fuel Pump House
 and Distribution Line for AST-35
 Phase 1 RI Sampling Locations**
 Camp Hero Phase 1 Technical Memorandum

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-9
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Note: The location of the former excavation and associated samples was estimated from previous drawings



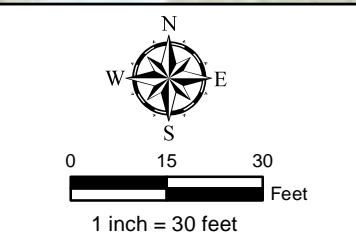
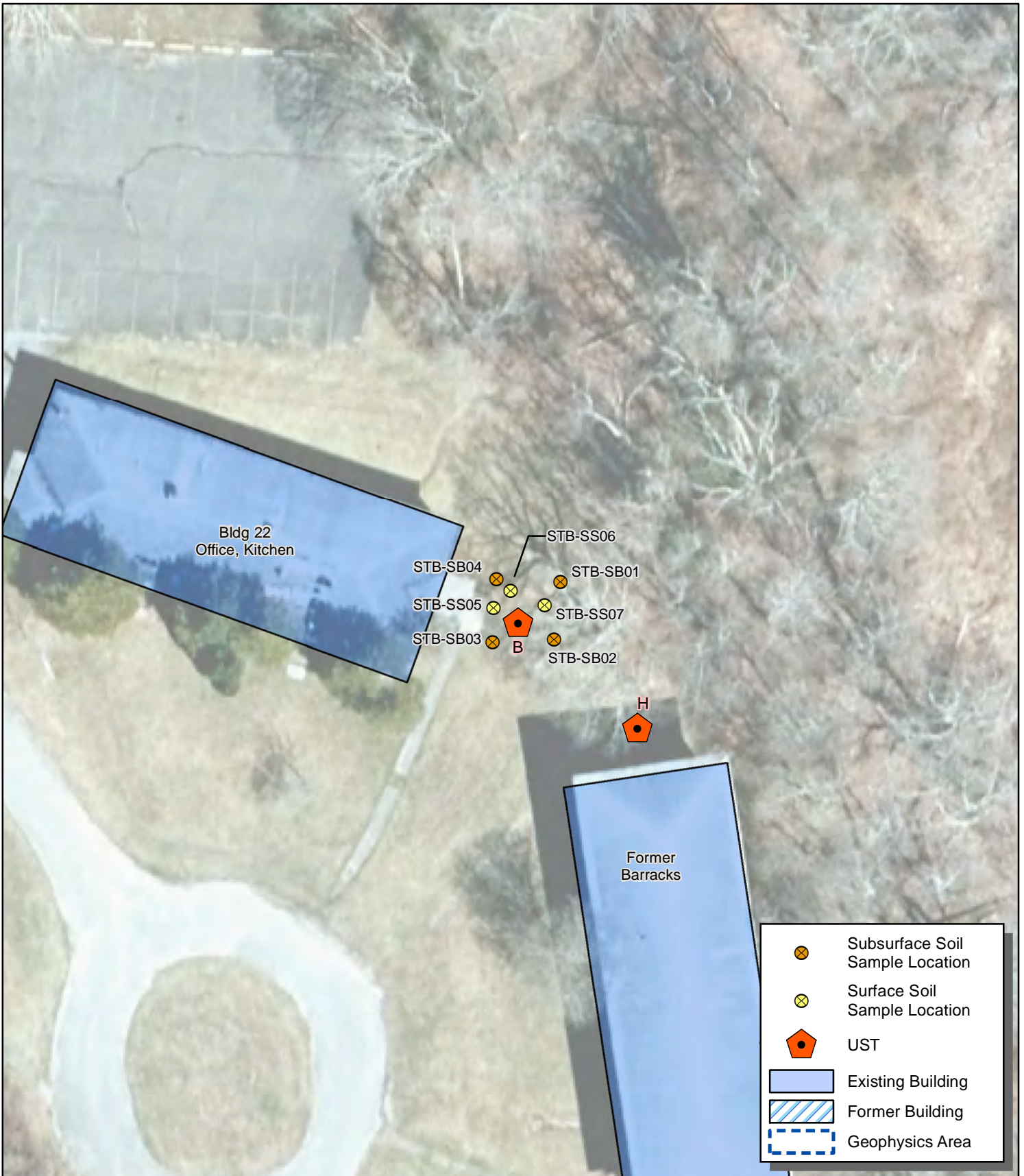
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Building 203 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

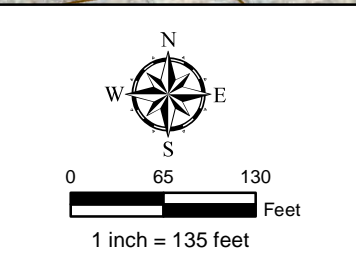
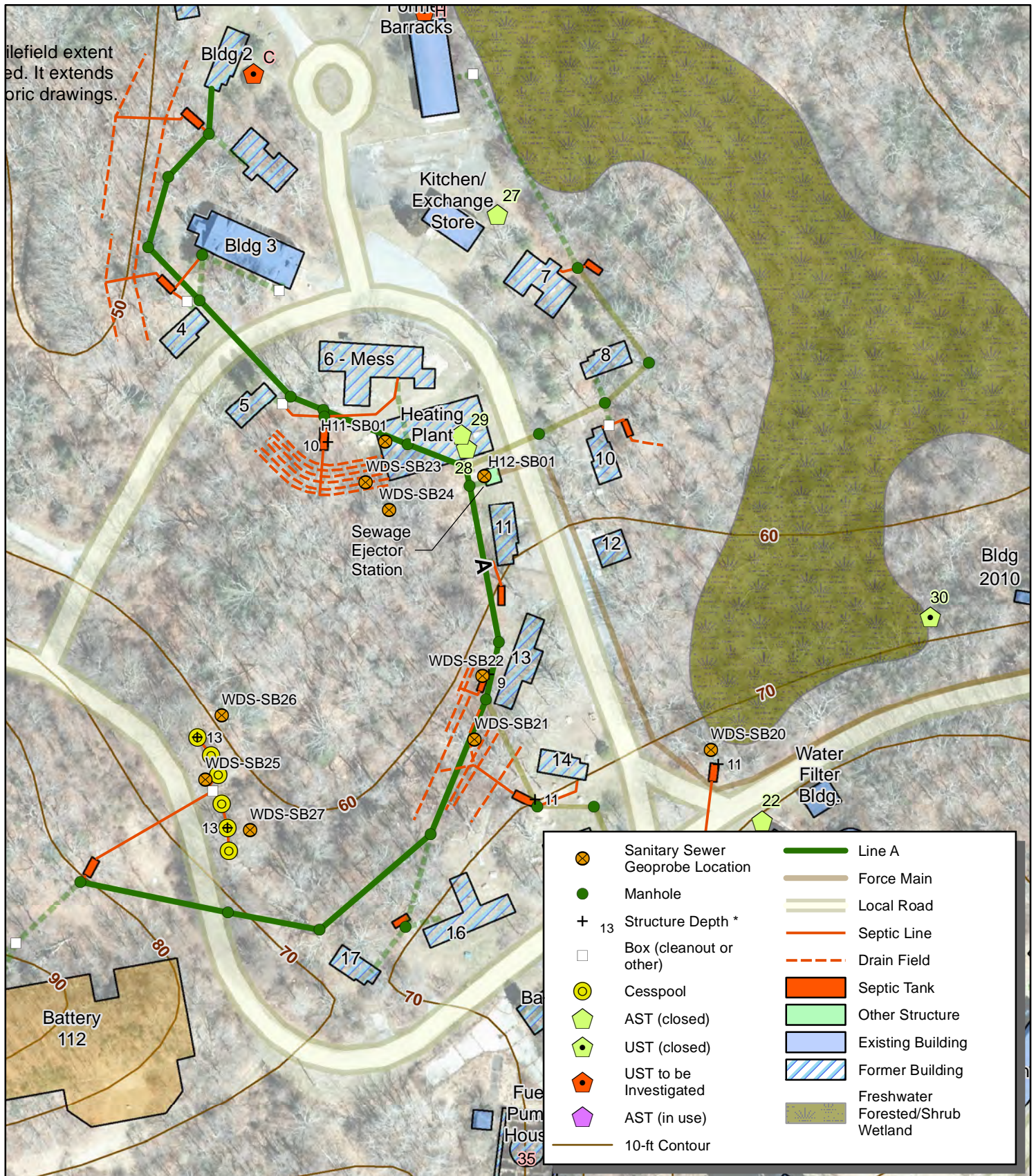
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-10
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Building 22 (Tank B)
Phase 1 RI Sampling Locations
 Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-11
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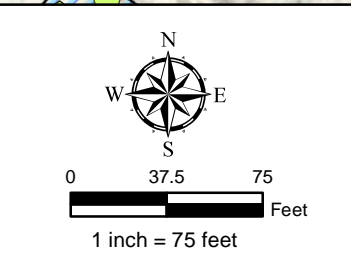
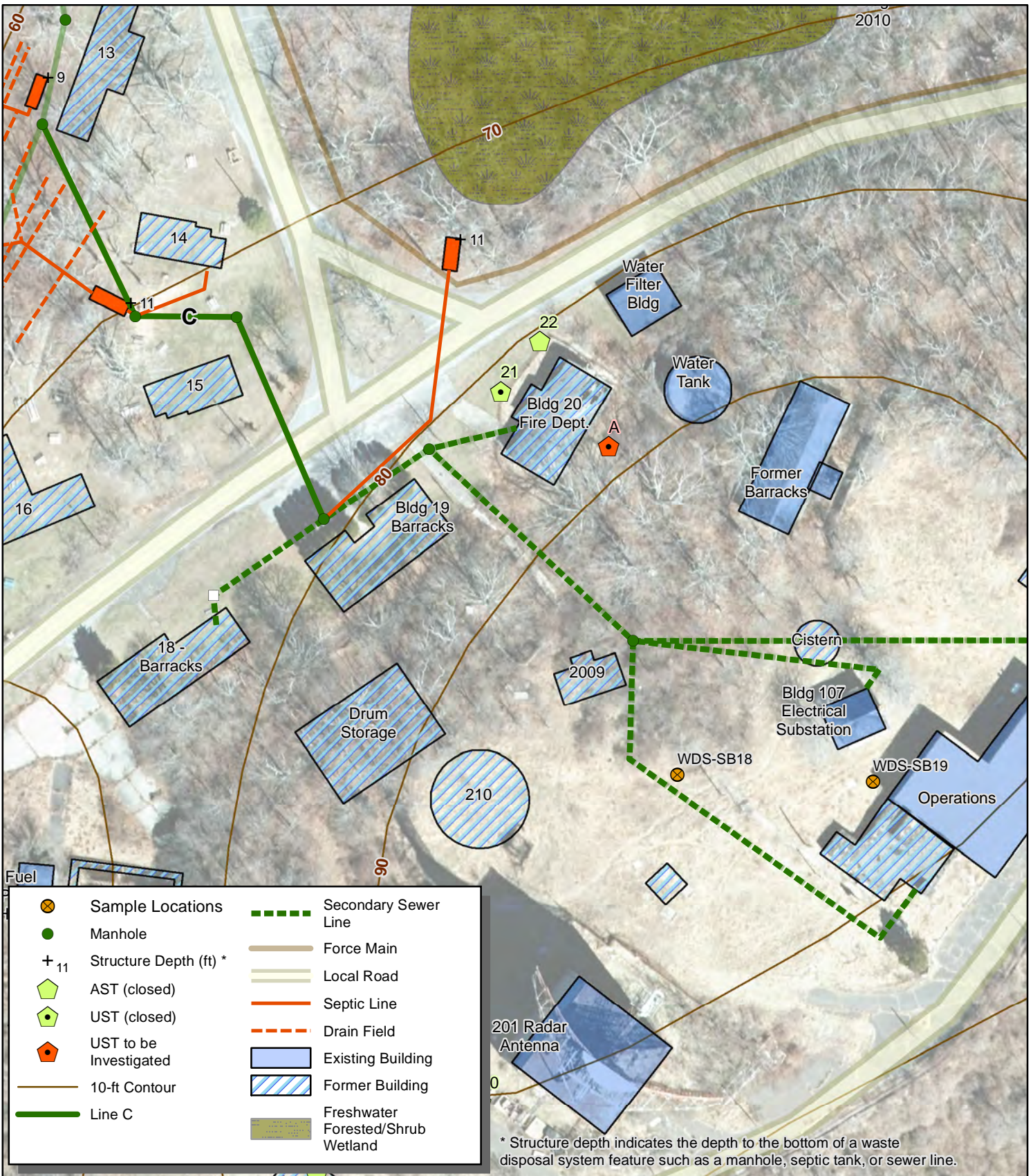


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**Line A Abandoned Waste Disposal Systems
Phase 1 RI Sampling Locations**

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-12
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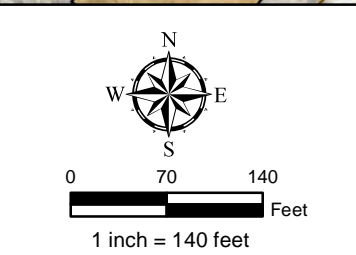
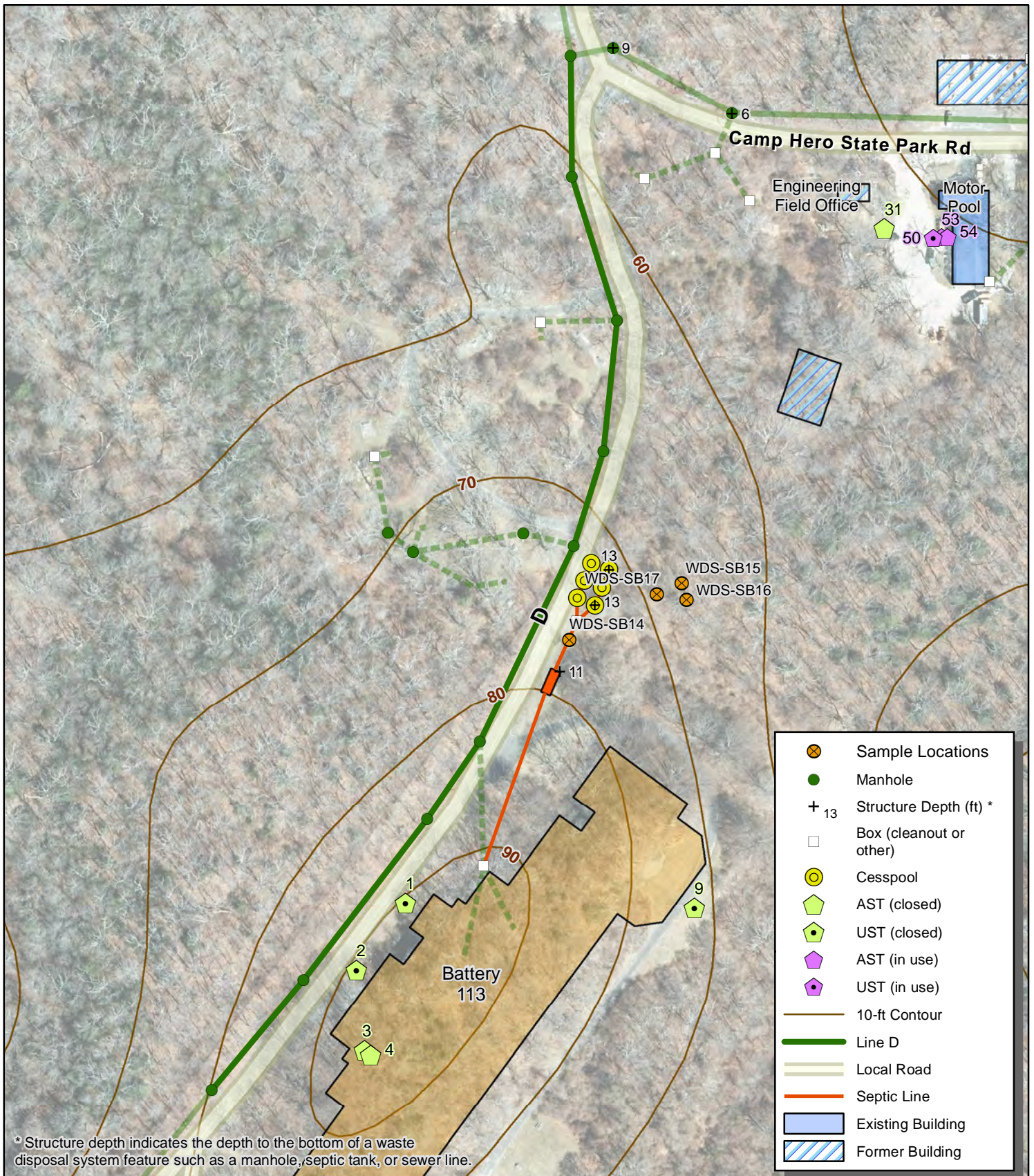


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Line C Abandoned Waste Disposal Systems Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-13
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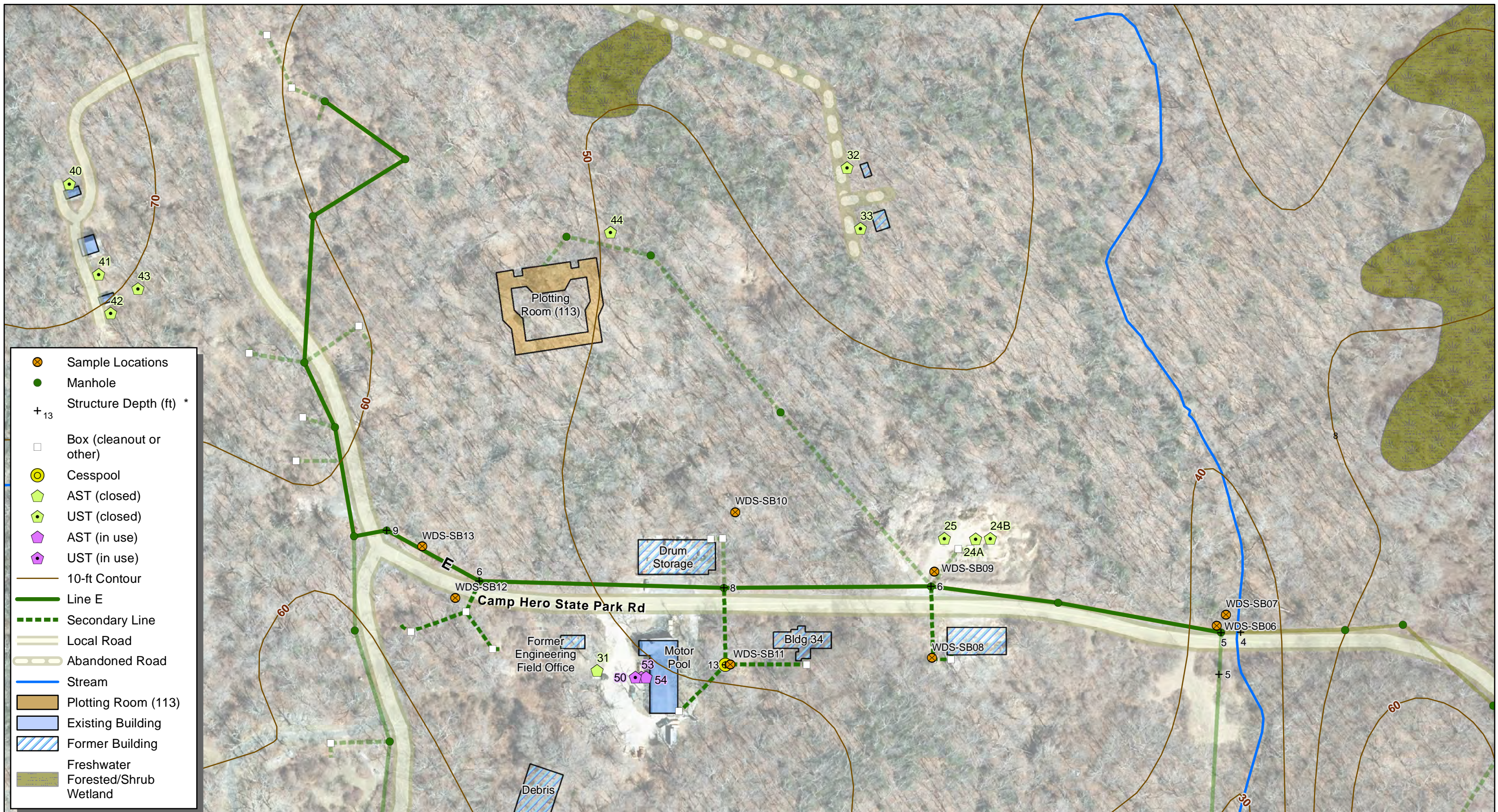
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**Line D Abandoned Waste Disposal Systems
Phase 1 RI Sampling Locations**

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-14
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- Sample Locations
- Manhole
- Structure Depth (ft) *
- Box (cleanout or other)
- Cesspool
- AST (closed)
- UST (closed)
- AST (in use)
- UST (in use)
- 10-ft Contour
- Line E
- Secondary Line
- Local Road
- Abandoned Road
- Stream
- Plotting Room (113)
- Existing Building
- Former Building
- Freshwater
- Forested/Shrub Wetland

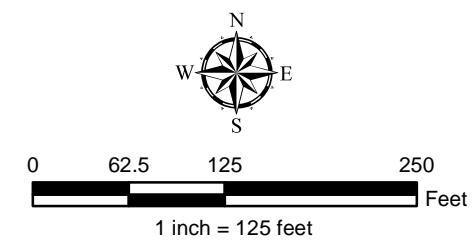


* Structure depth indicates the depth to the bottom of a waste disposal system feature such as a manhole, septic tank, or sewer line.

Surface water features obtained from National Hydrography Dataset (NHD) Dates of publication vary.

Wetlands shapes from U. S. Fish and Wildlife Service. 2015. National Wetlands Inventory website. <http://www.fws.gov/wetlands/>

NAD 1983 StatePlane Long Island FIPS 3104

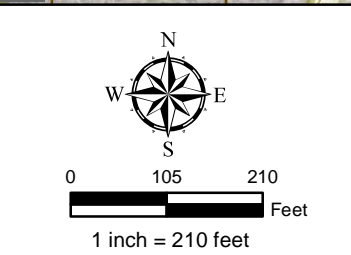
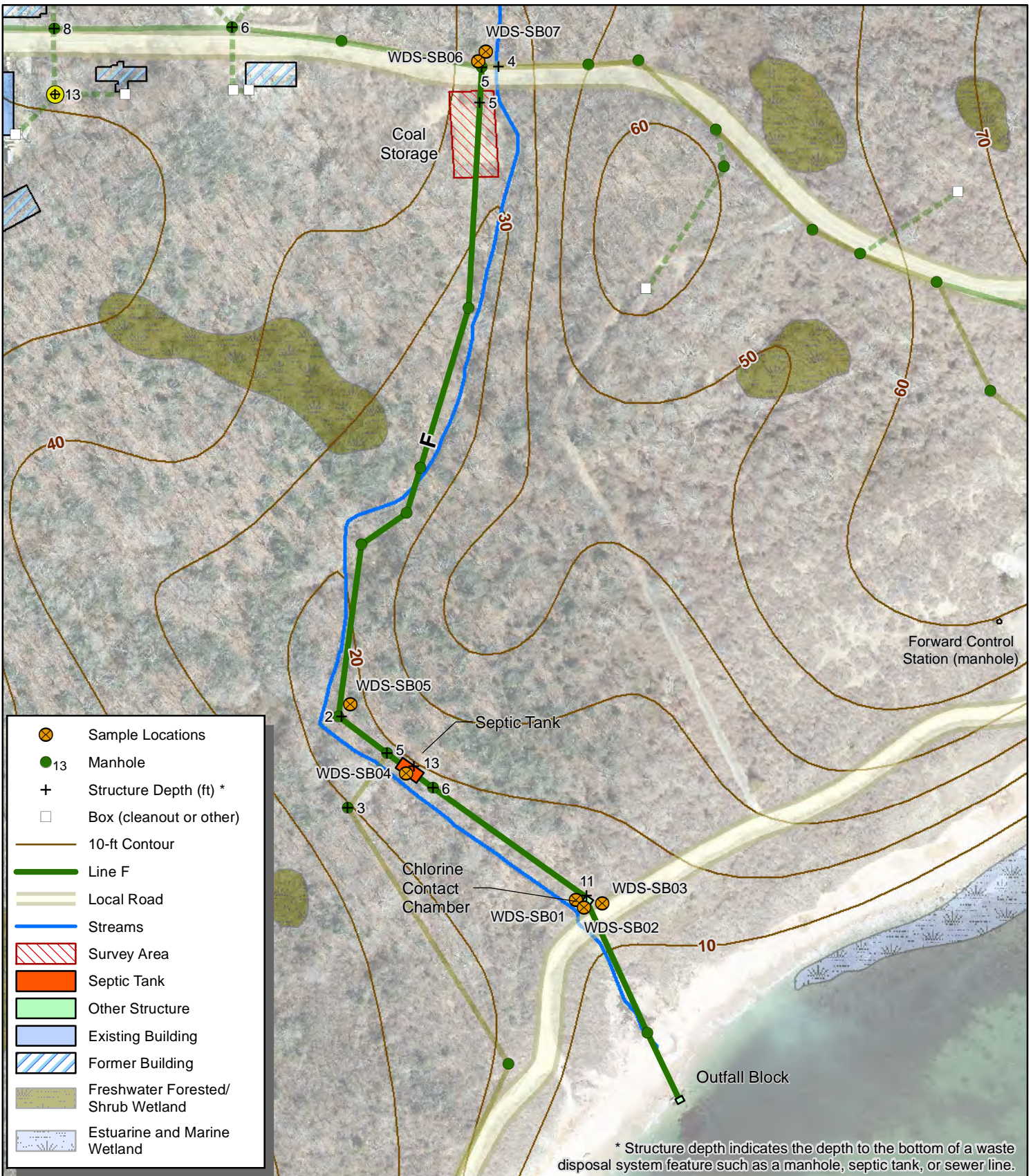


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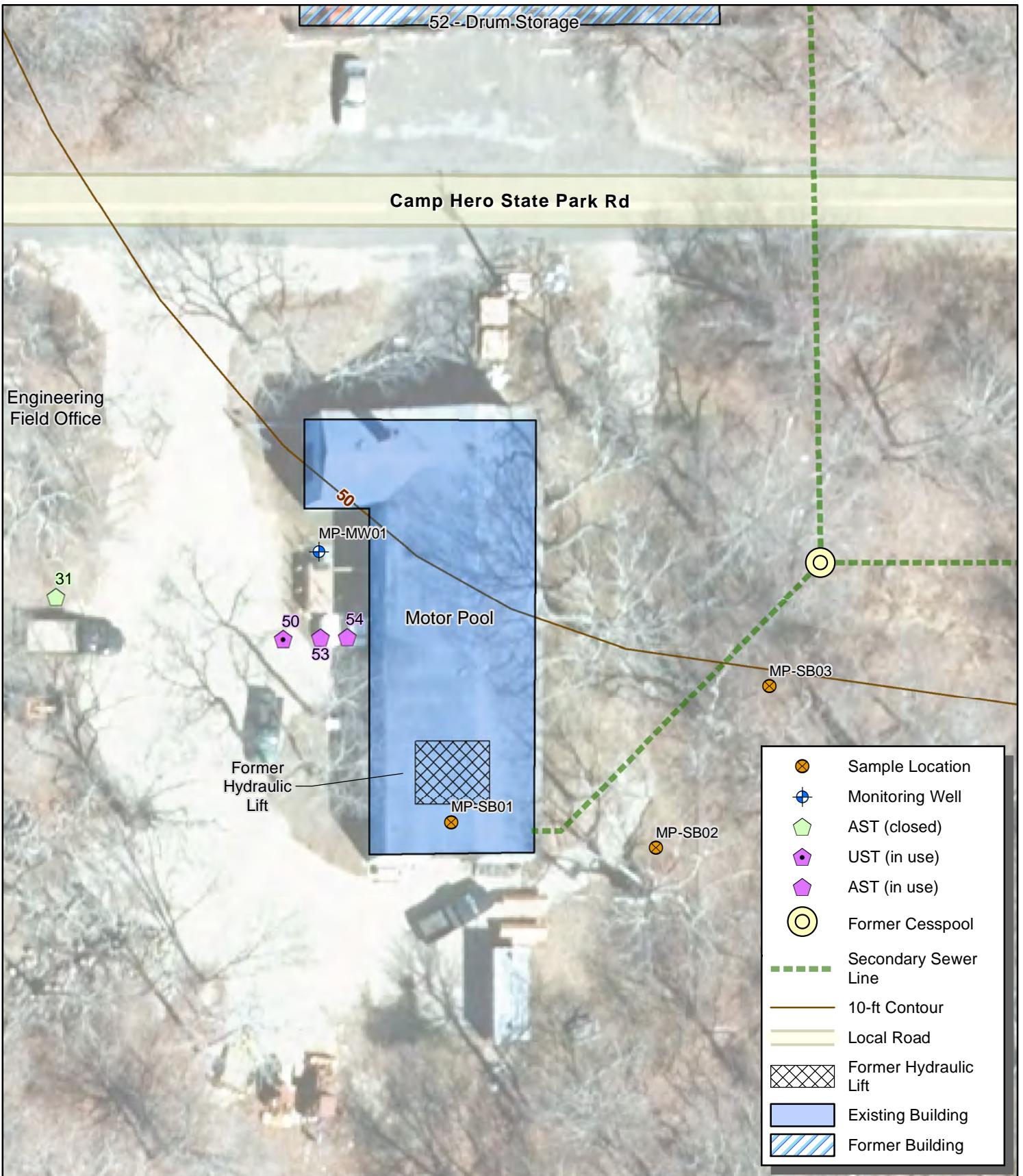
**Line E Abandoned Waste Disposal Systems
Phase 1 RI Sampling Locations**

Camp Hero Phase I Field Investigation Report

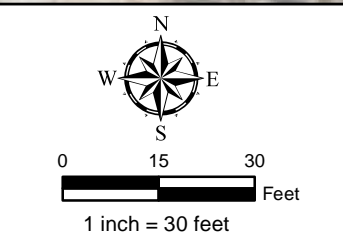
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-15
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		Line F Abandoned Waste Disposal Systems Phase 1 RI Sampling Locations	
Camp Hero Phase I Field Investigation Report			
PROJECT NO.	PREPARED BY:	DATE:	Figure 4-16
60443903	DDS	September 2016	



- Sample Location
- Monitoring Well
- AST (closed)
- UST (in use)
- AST (in use)
- Former Cesspool
- Secondary Sewer Line
- 10-ft Contour
- Local Road
- Former Hydraulic Lift
- Existing Building
- Former Building

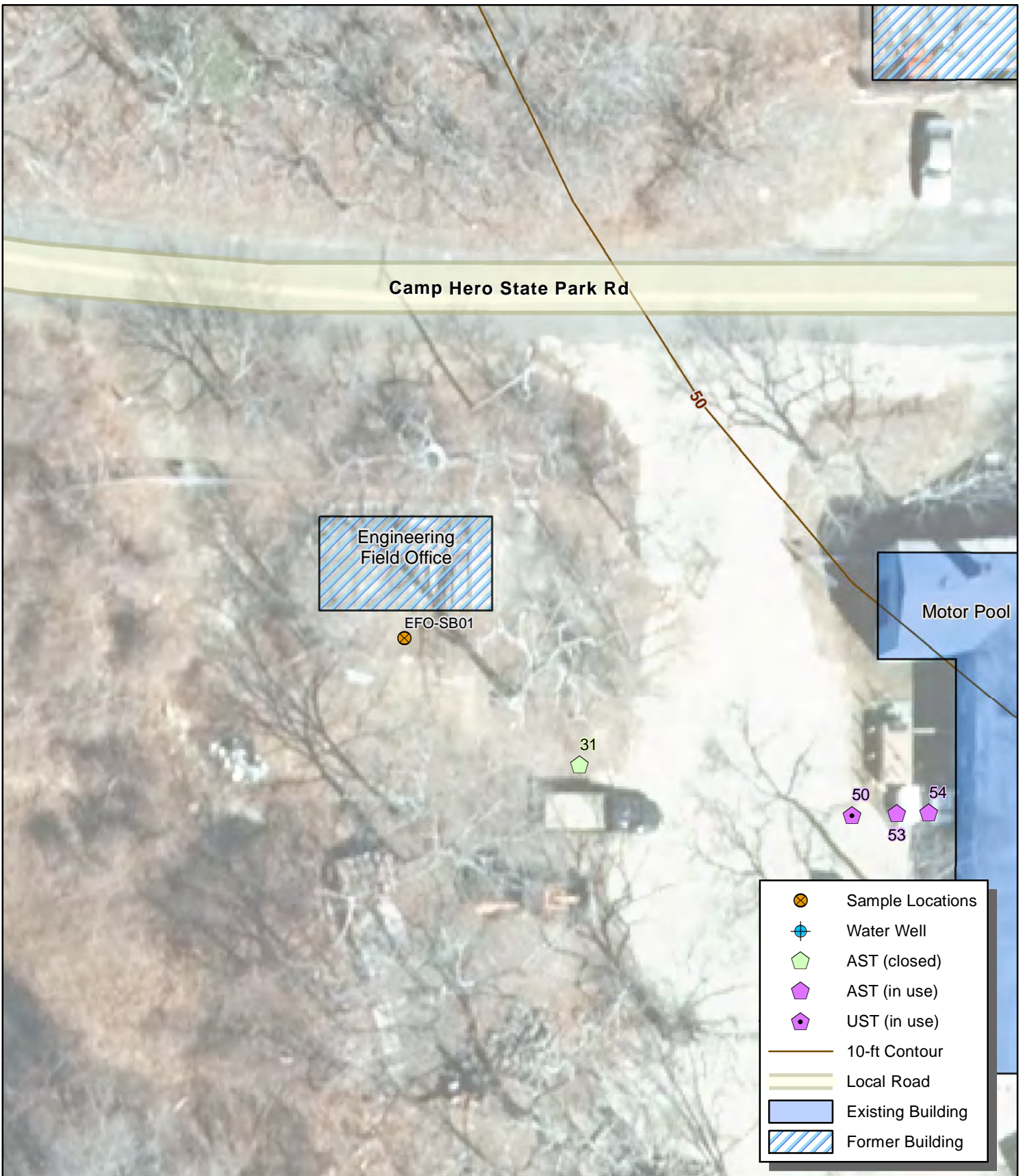


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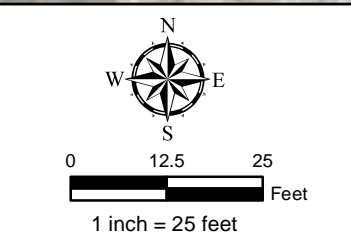
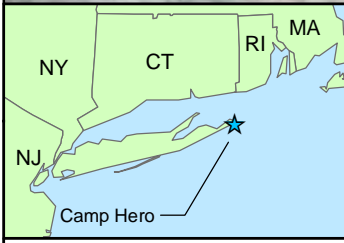
Motor Pool Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-17
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- Sample Locations
- Water Well
- AST (closed)
- AST (in use)
- UST (in use)
- 10-ft Contour
- Local Road
- Existing Building
- Former Building

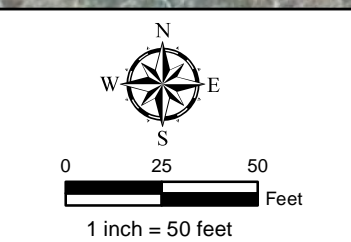
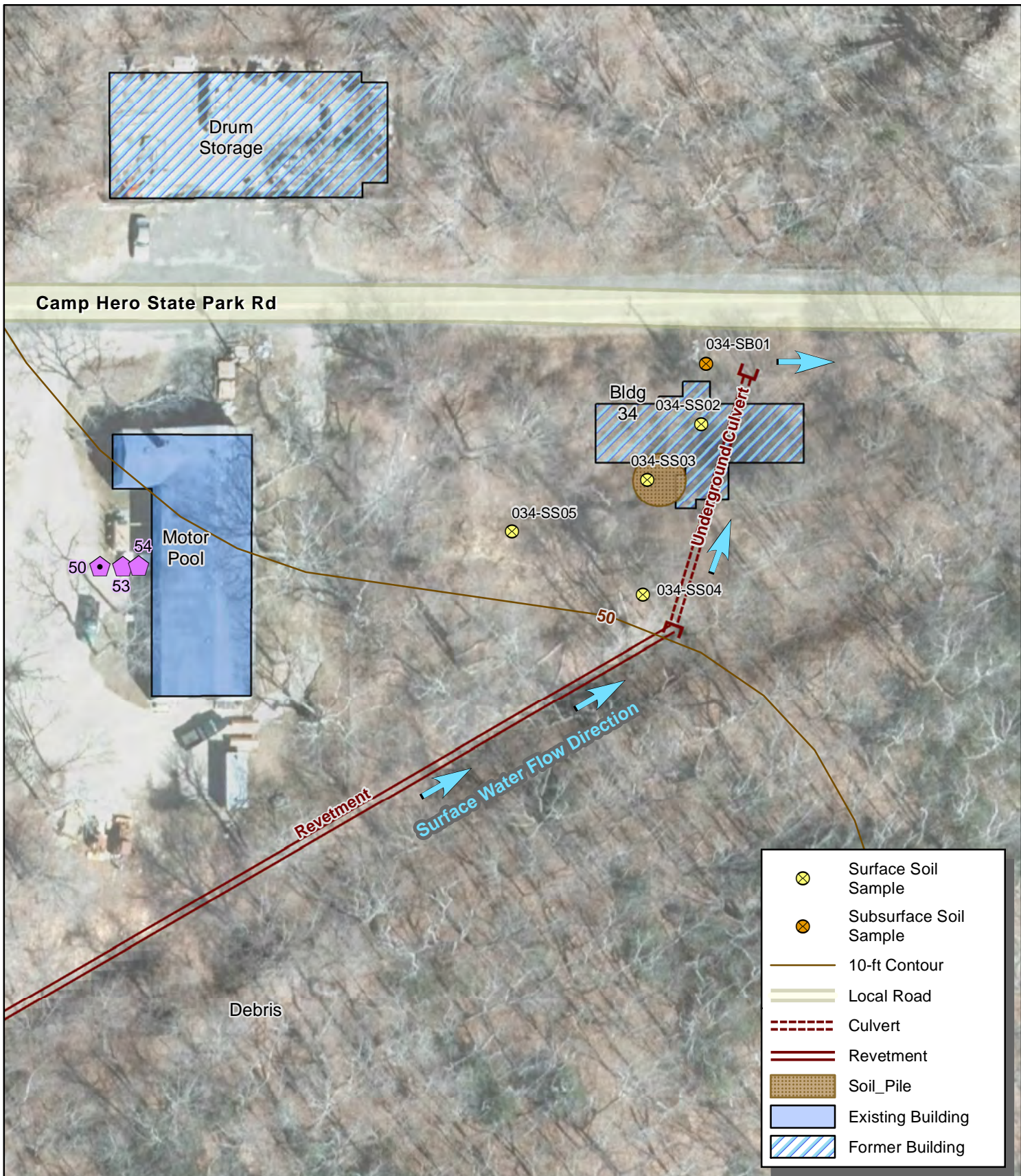


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**Engineering Field Office
Phase 1 RI Sampling Locations**

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-18
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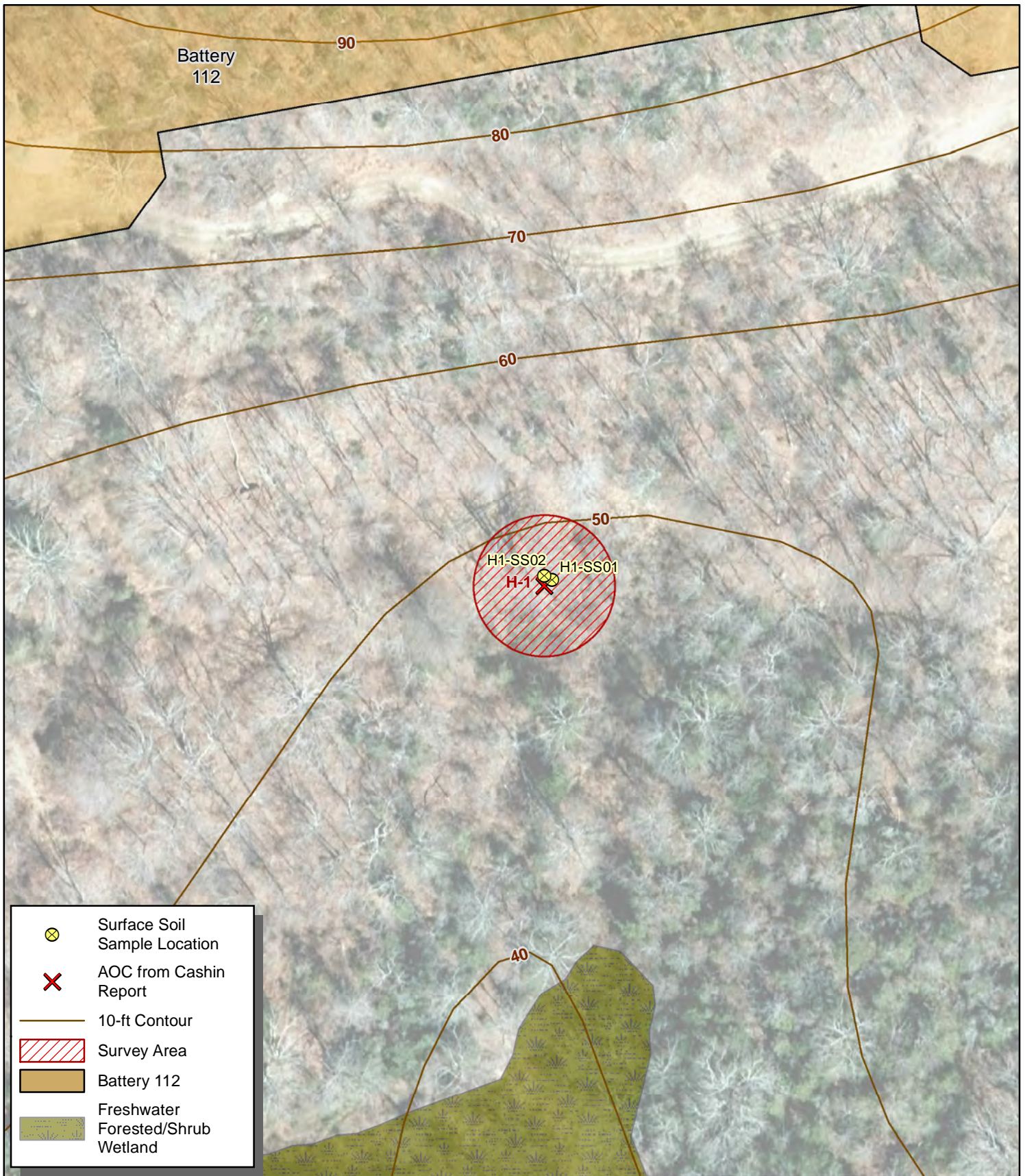
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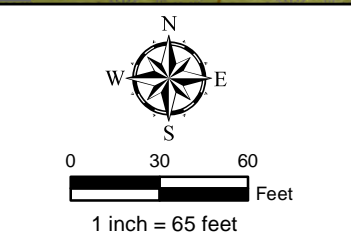
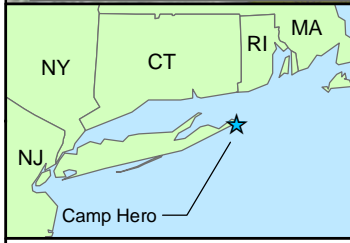
**Former Building 34
Phase 1 RI Sampling Locations**

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-19
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	Surface Soil Sample Location
	AOC from Cashin Report
	10-ft Contour
	Survey Area
	Battery 112
	Freshwater Forested/Shrub Wetland

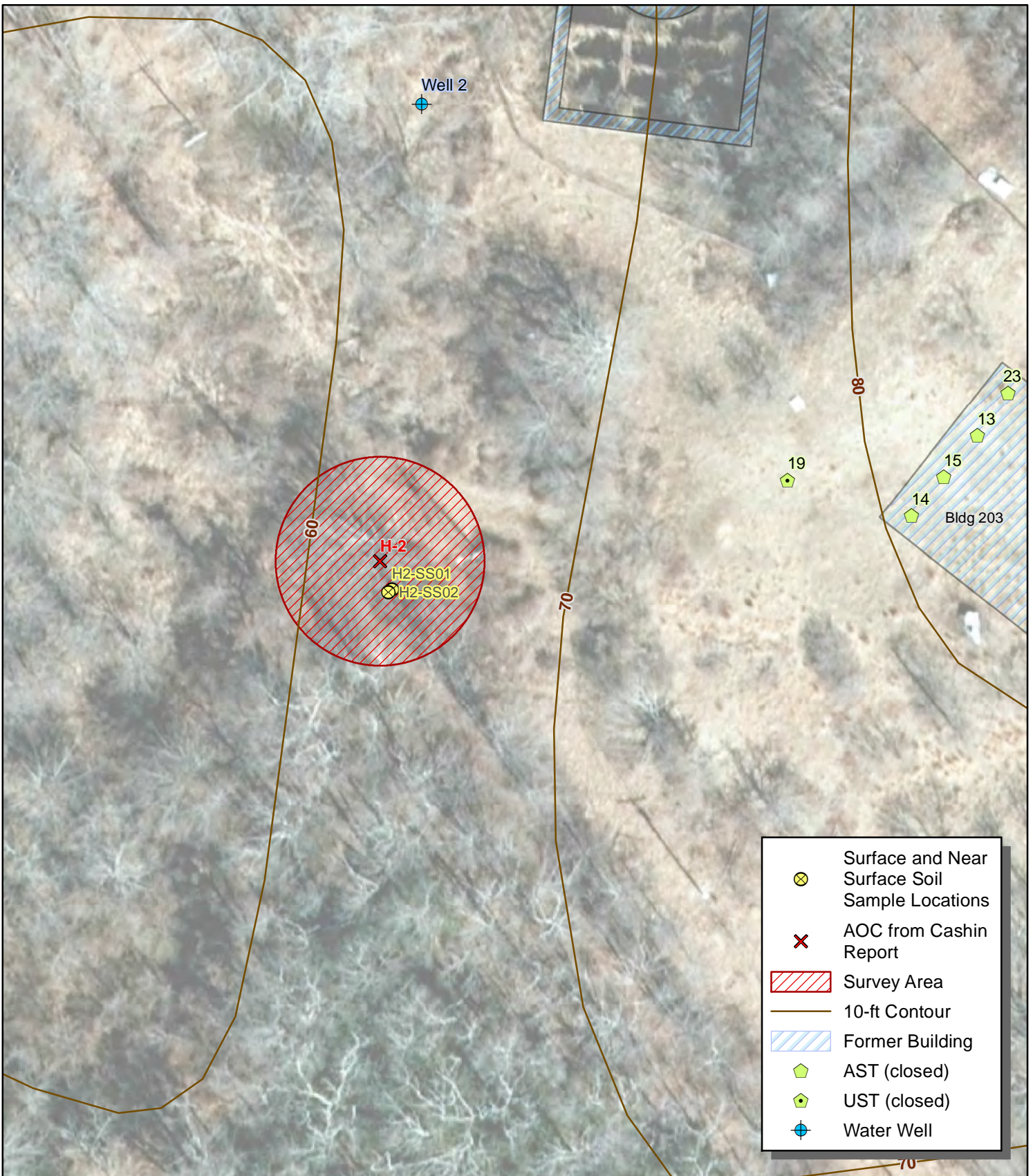










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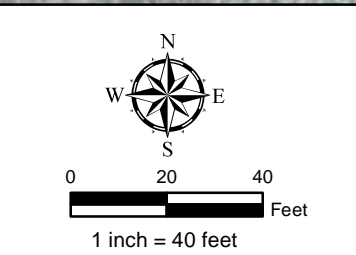
H-1 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-20
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-  Surface and Near Surface Soil Sample Locations
-  AOC from Cashin Report
-  Survey Area
-  10-ft Contour
-  Former Building
-  AST (closed)
-  UST (closed)
-  Water Well



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H-2 Phase 1 RI Sampling Locations

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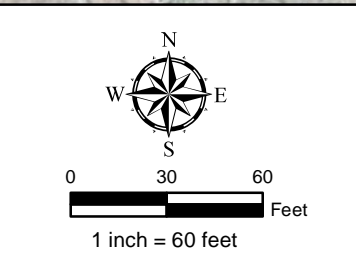
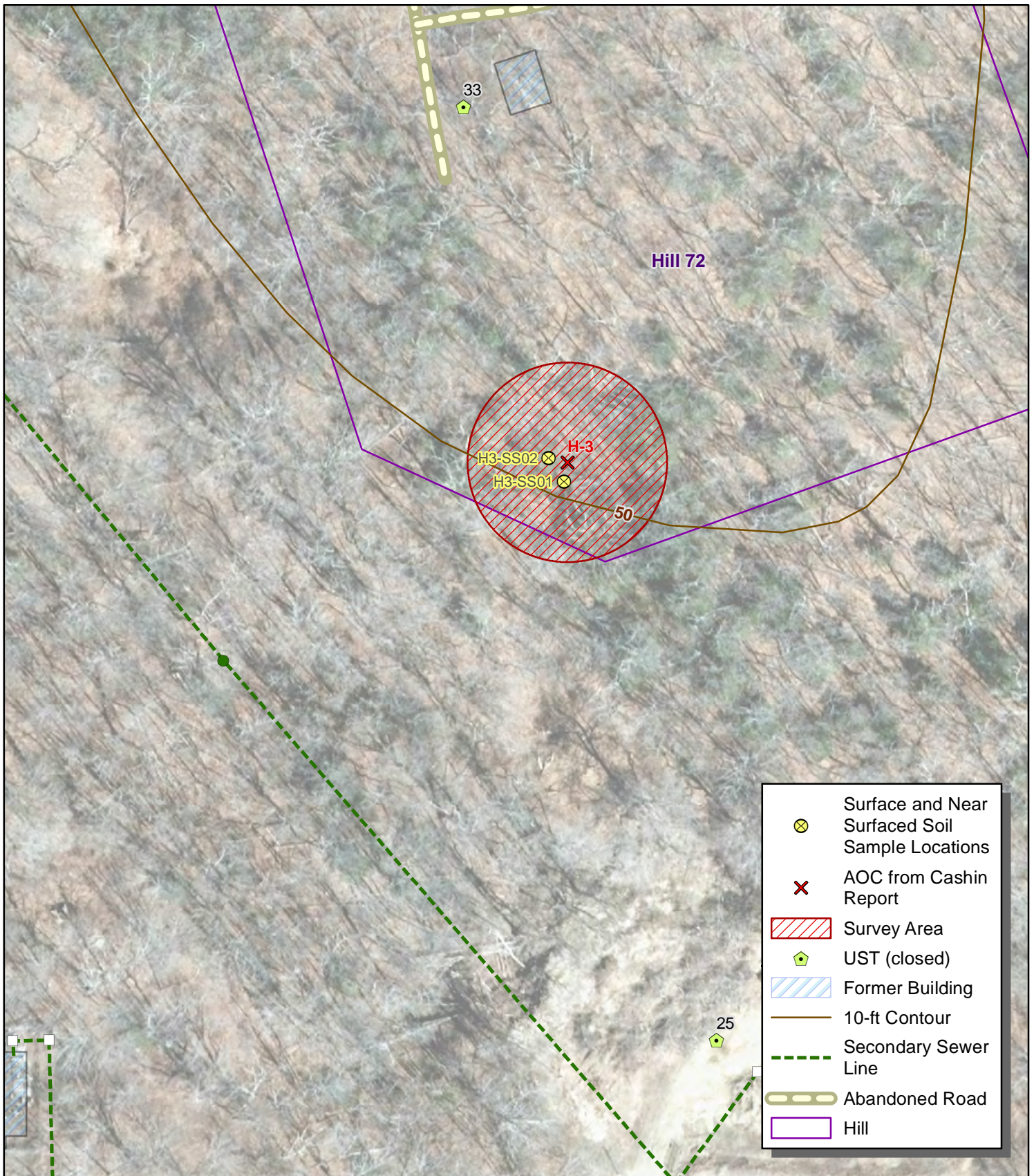
DATE:

60443903

DDS

September 2016

Figure 4-21

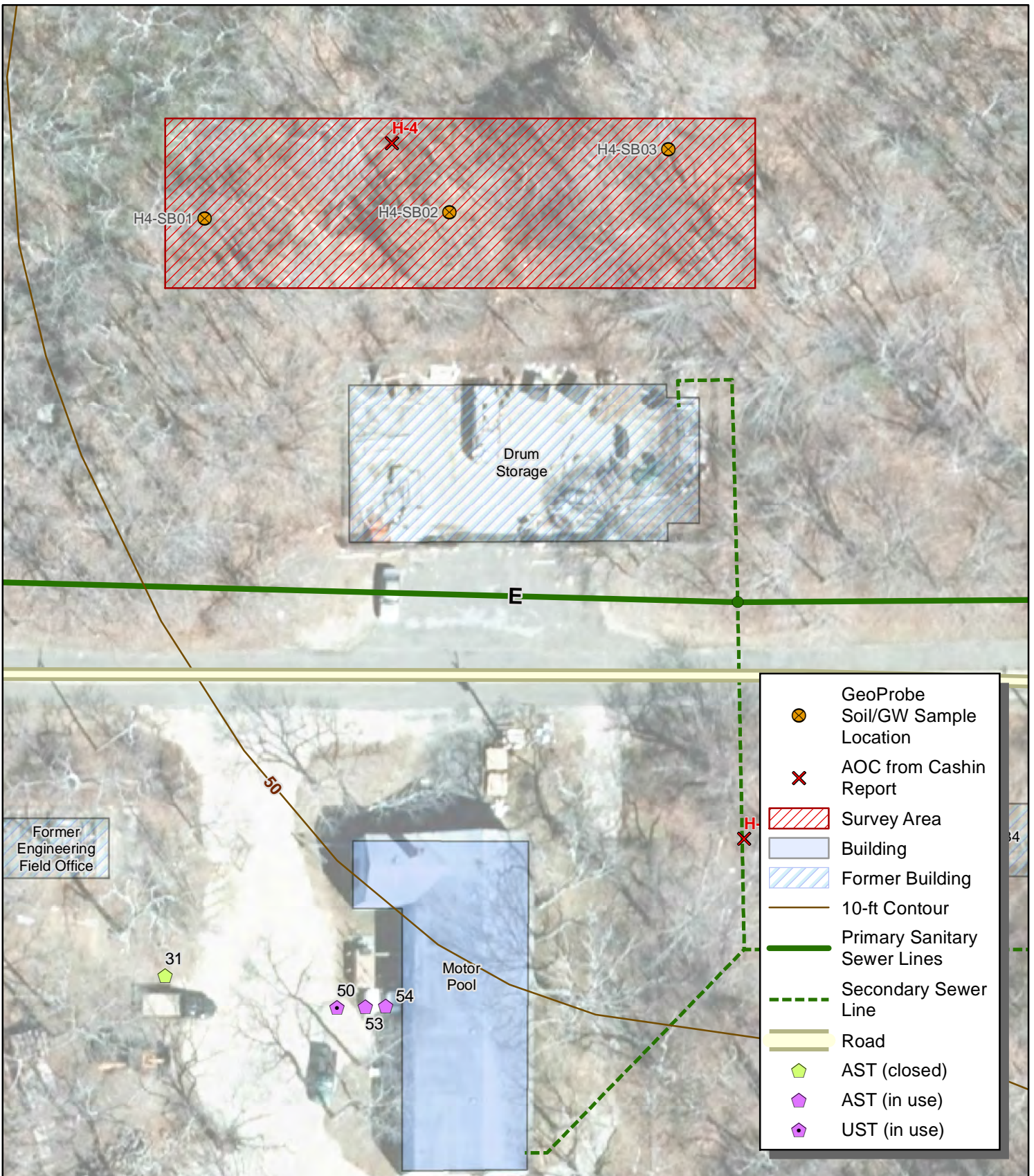


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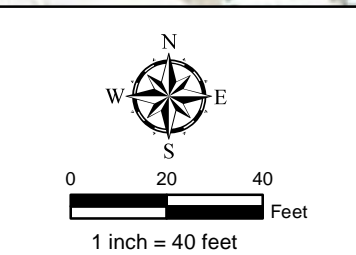
H-3 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-22
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- GeoProbe Soil/GW Sample Location
- AOC from Cashin Report
- Survey Area
- Building
- Former Building
- 10-ft Contour
- Primary Sanitary Sewer Lines
- Secondary Sewer Line
- Road
- AST (closed)
- AST (in use)
- UST (in use)

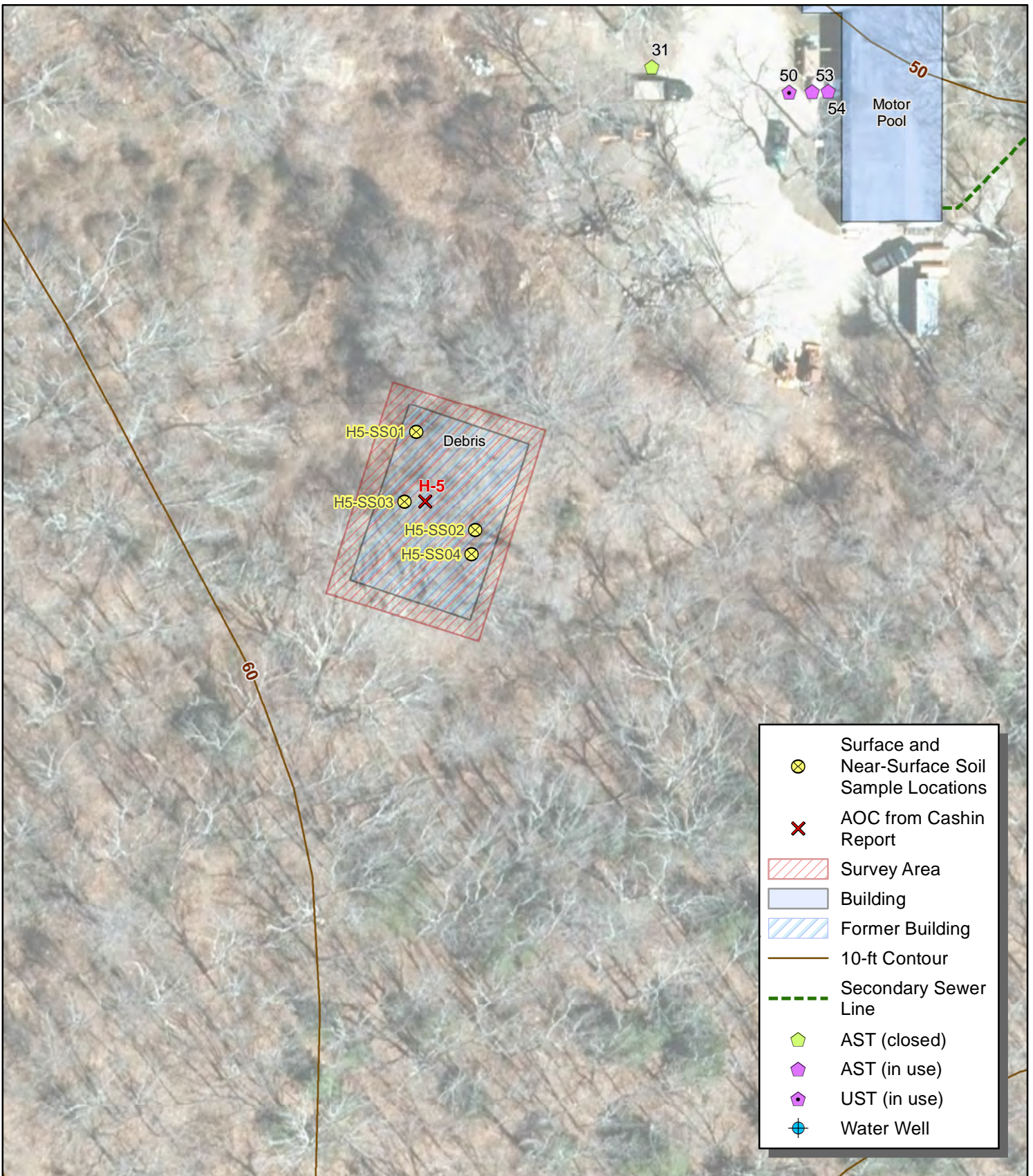


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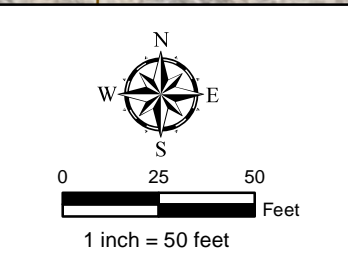
H-4 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-23
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- Surface and Near-Surface Soil Sample Locations
- AOC from Cashin Report
- Survey Area
- Building
- Former Building
- 10-ft Contour
- Secondary Sewer Line
- AST (closed)
- AST (in use)
- UST (in use)
- Water Well

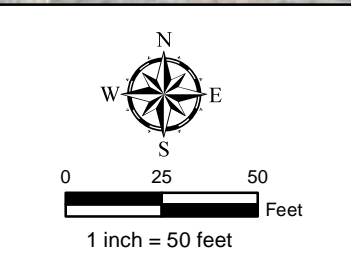
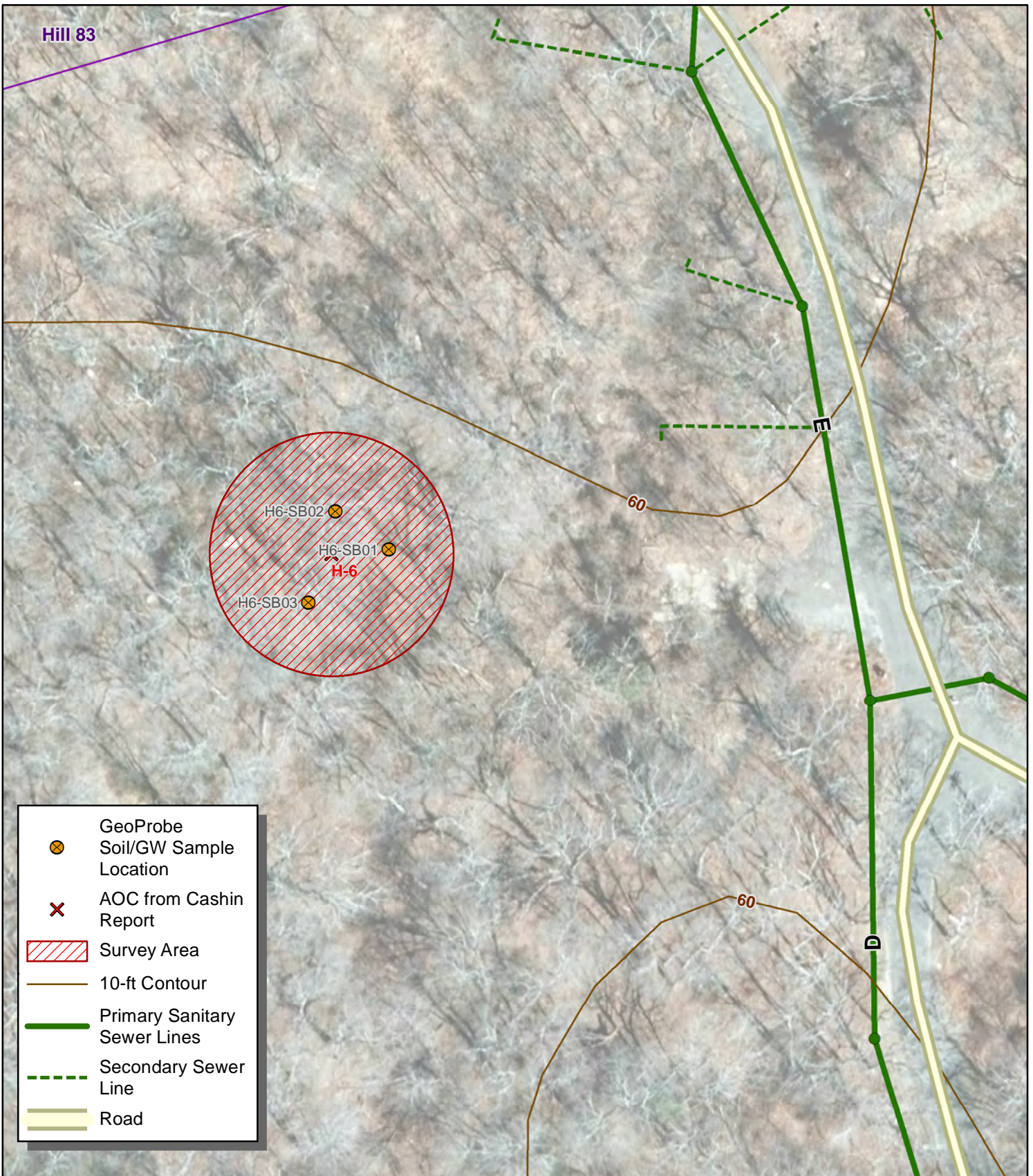


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H-5 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-24
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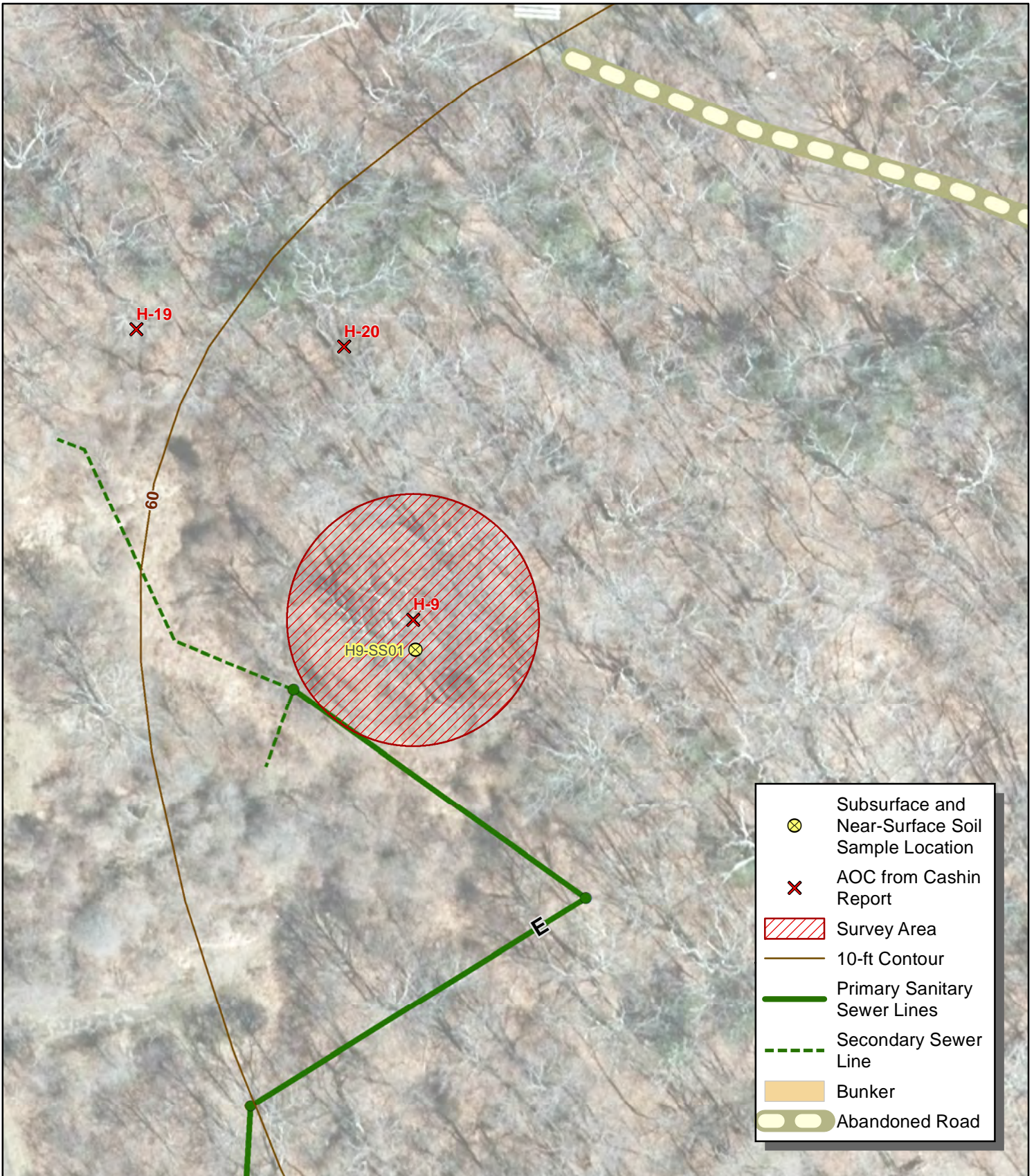










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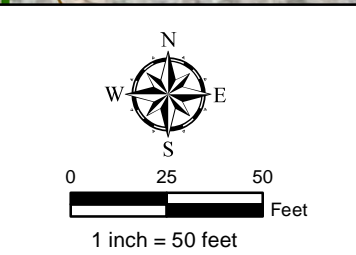
H-6 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-25
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-  Subsurface and Near-Surface Soil Sample Location
-  AOC from Cashin Report
-  Survey Area
-  10-ft Contour
-  Primary Sanitary Sewer Lines
-  Secondary Sewer Line
-  Bunker
-  Abandoned Road

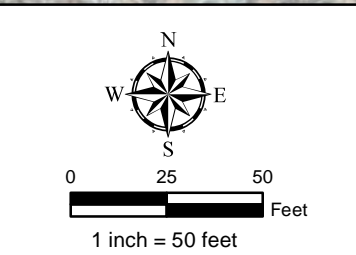
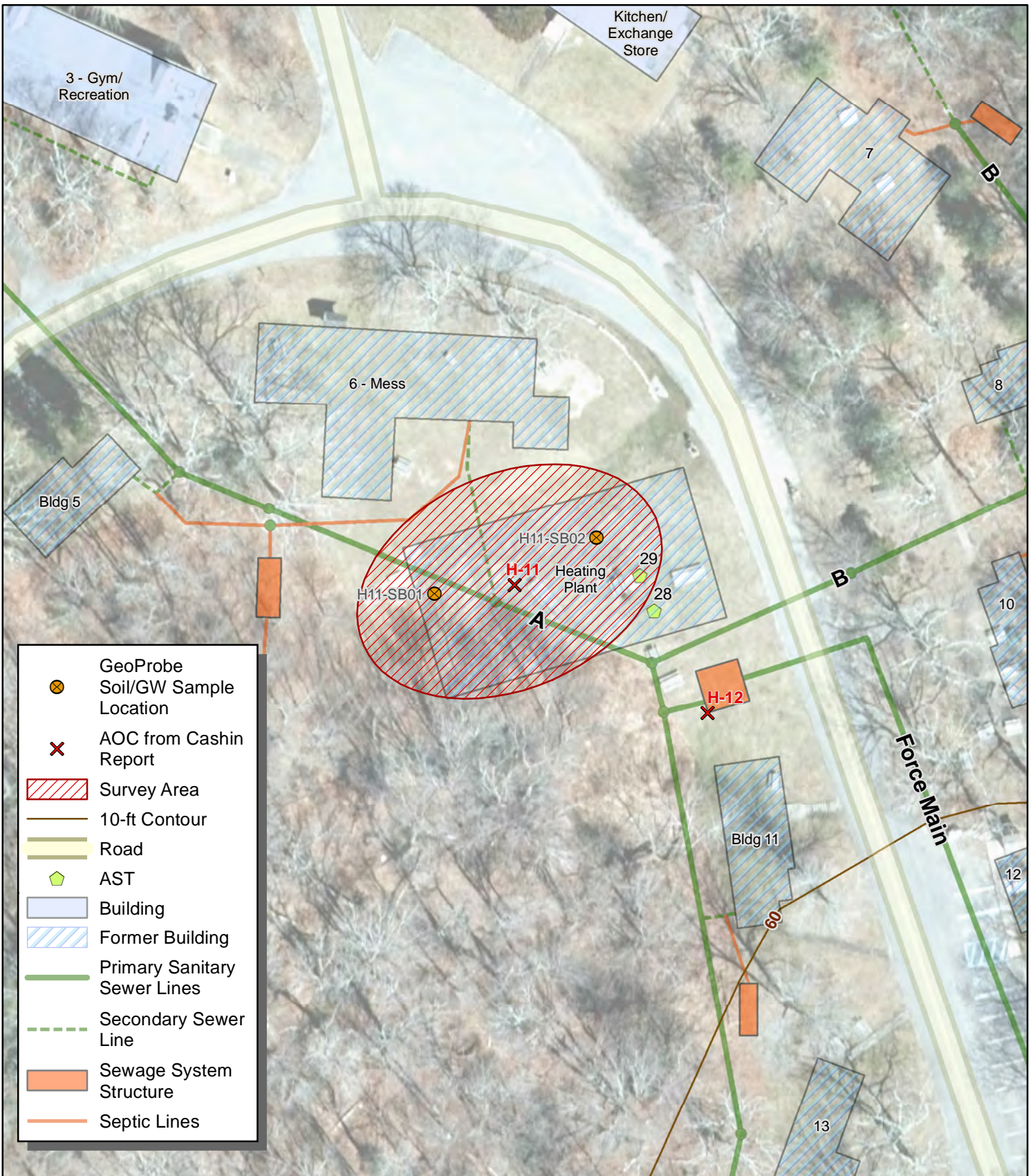


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H-9 Phase 1 RI Sampling Locations

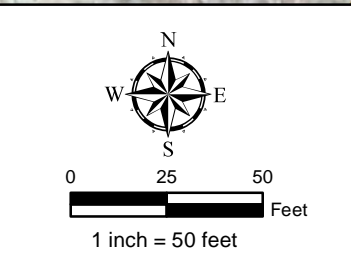
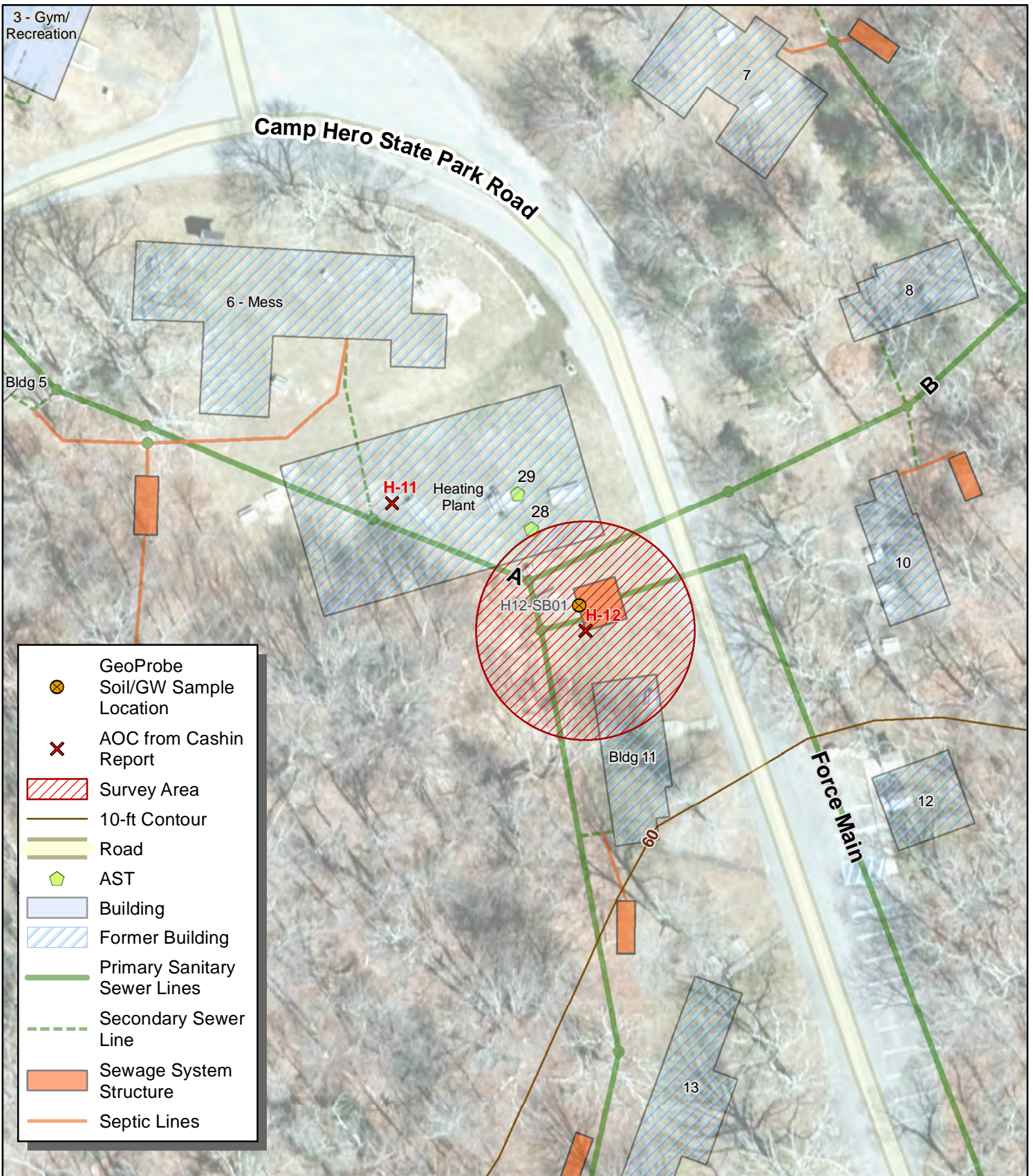
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PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-26
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H-11 Phase 1 RI Sampling Locations		
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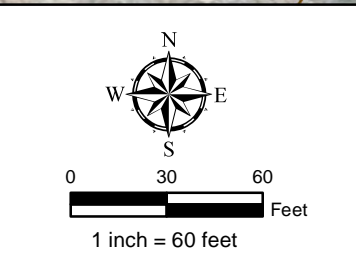
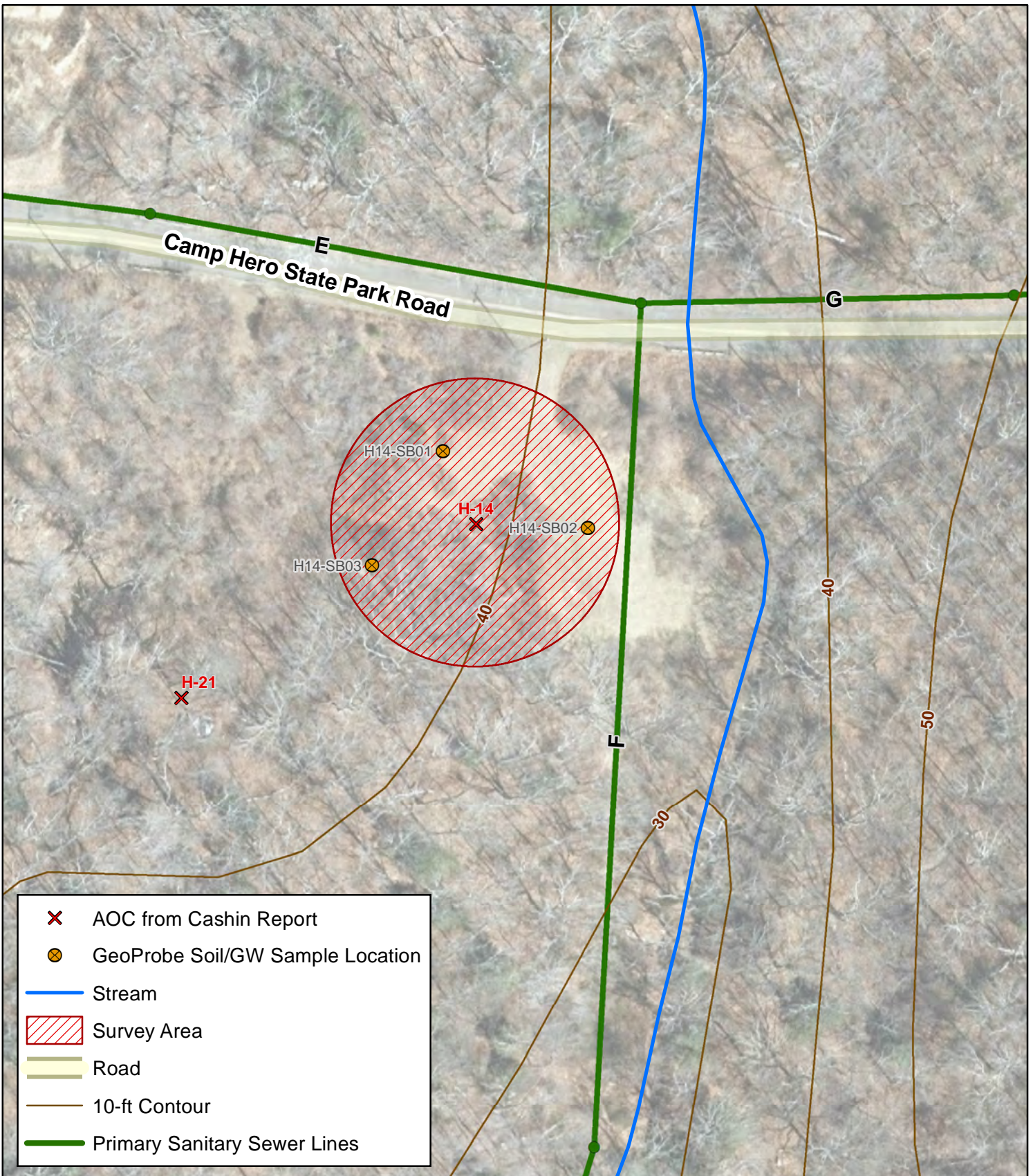


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H-12 Phase 1 RI Sampling Locations

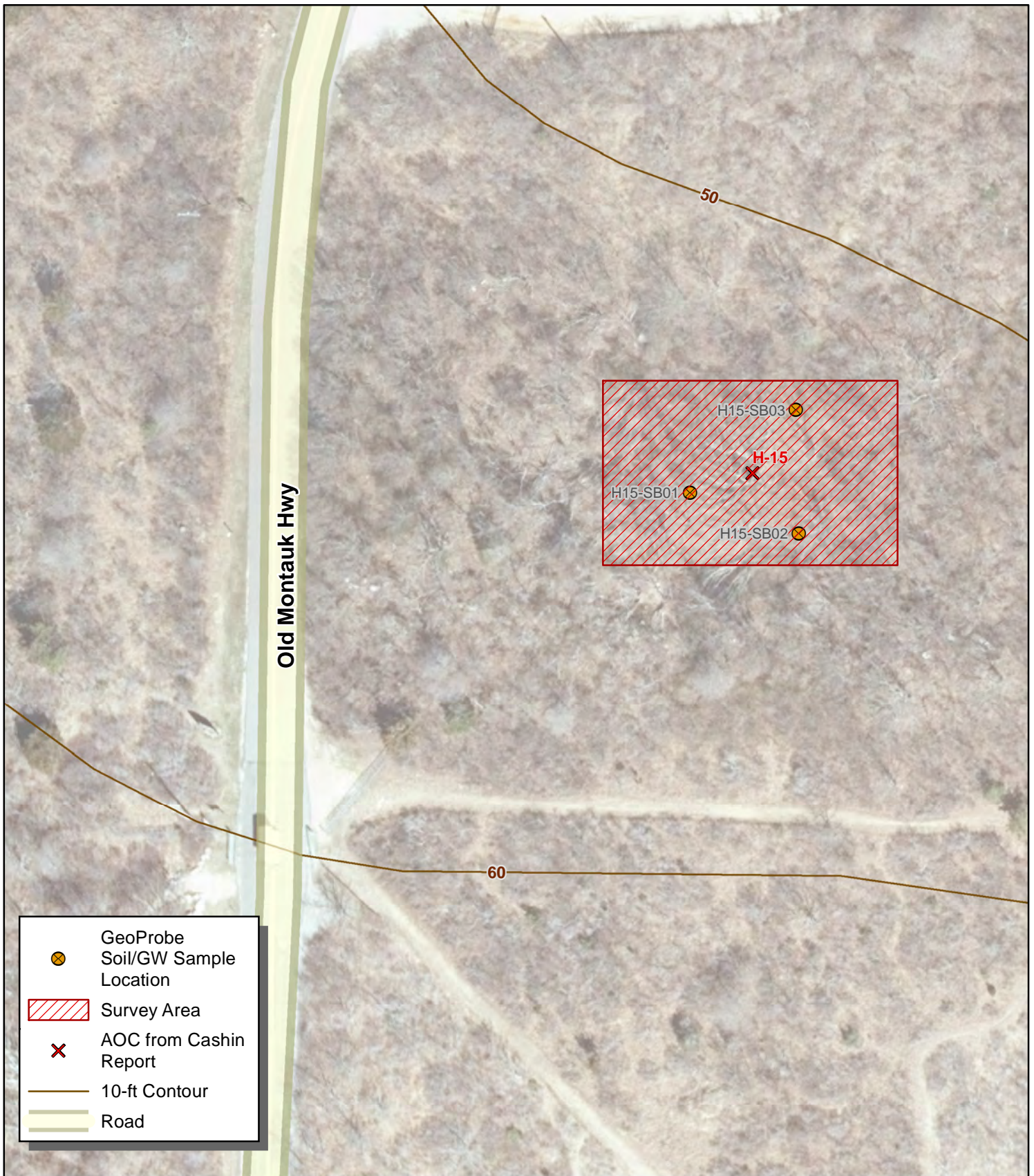
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PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-28
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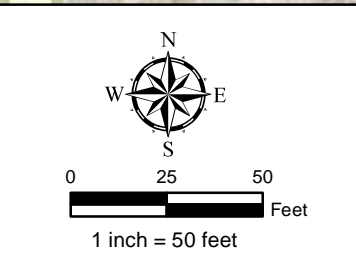


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	<h3>H-14 Phase 1 RI Sampling Locations</h3> <p>Camp Hero Phase I Field Investigation Report</p>		

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-29
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	GeoProbe Soil/GW Sample Location
	Survey Area
	AOC from Cashin Report
	10-ft Contour
	Road

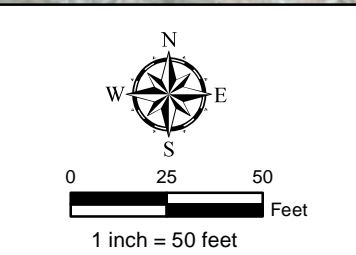
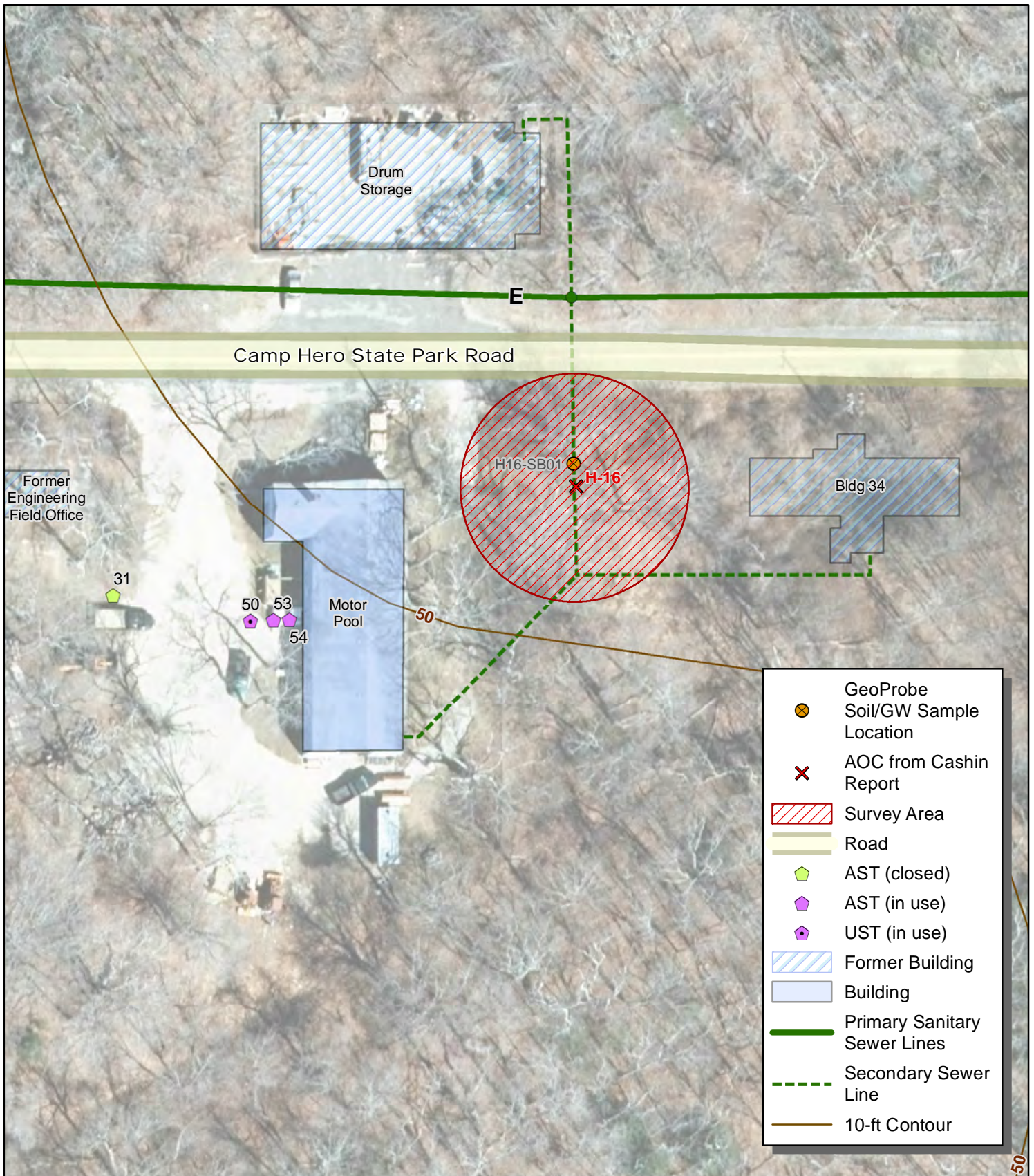


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H-15 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-30
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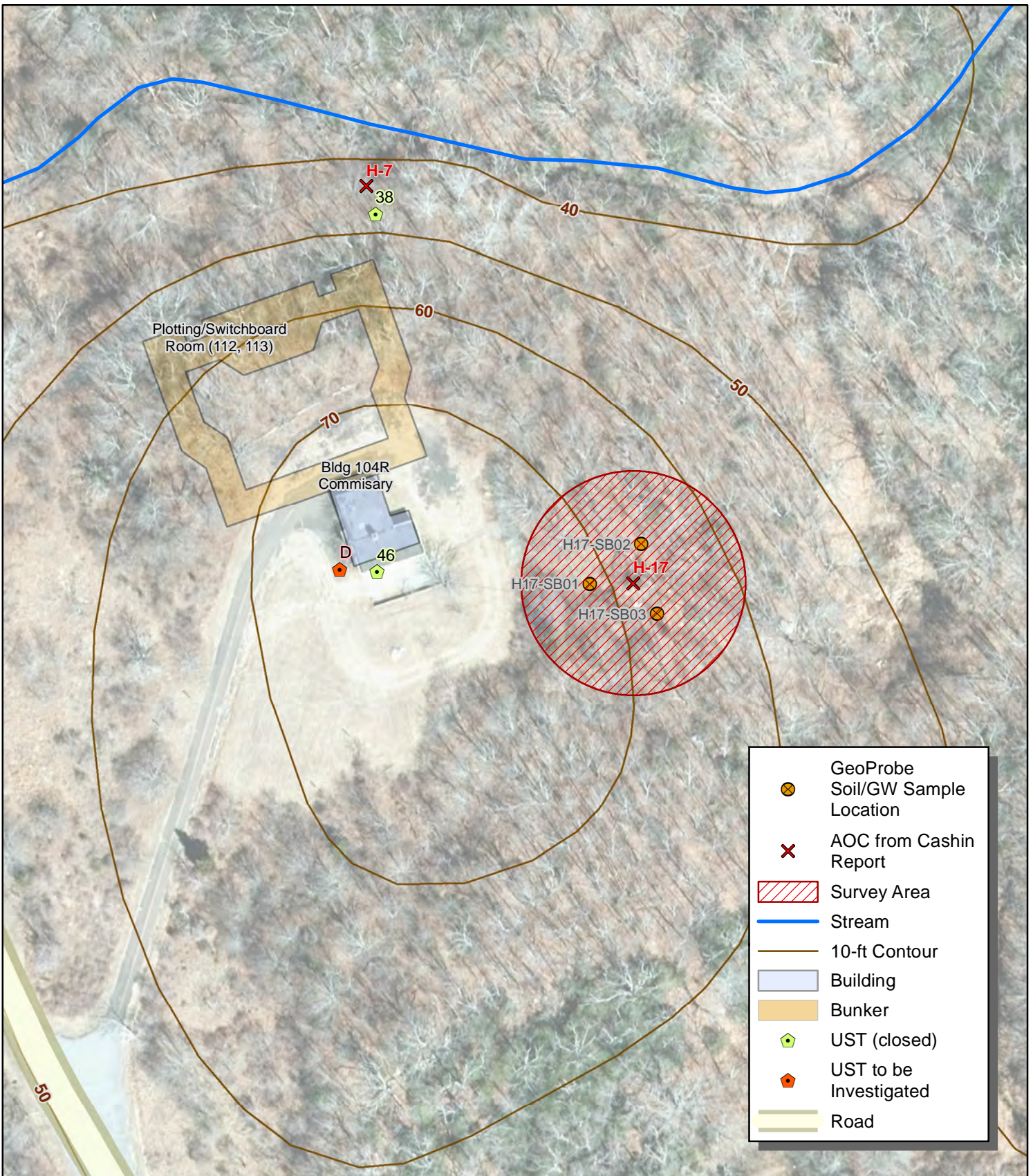
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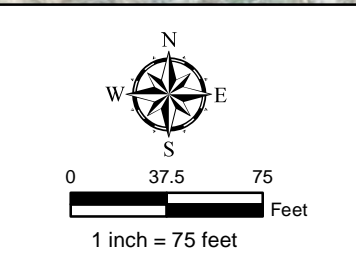
H-16 Phase 1 RI Sampling Locations

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- GeoProbe Soil/GW Sample Location
- AOC from Cashin Report
- Survey Area
- Stream
- 10-ft Contour
- Building
- Bunker
- UST (closed)
- UST to be Investigated
- Road

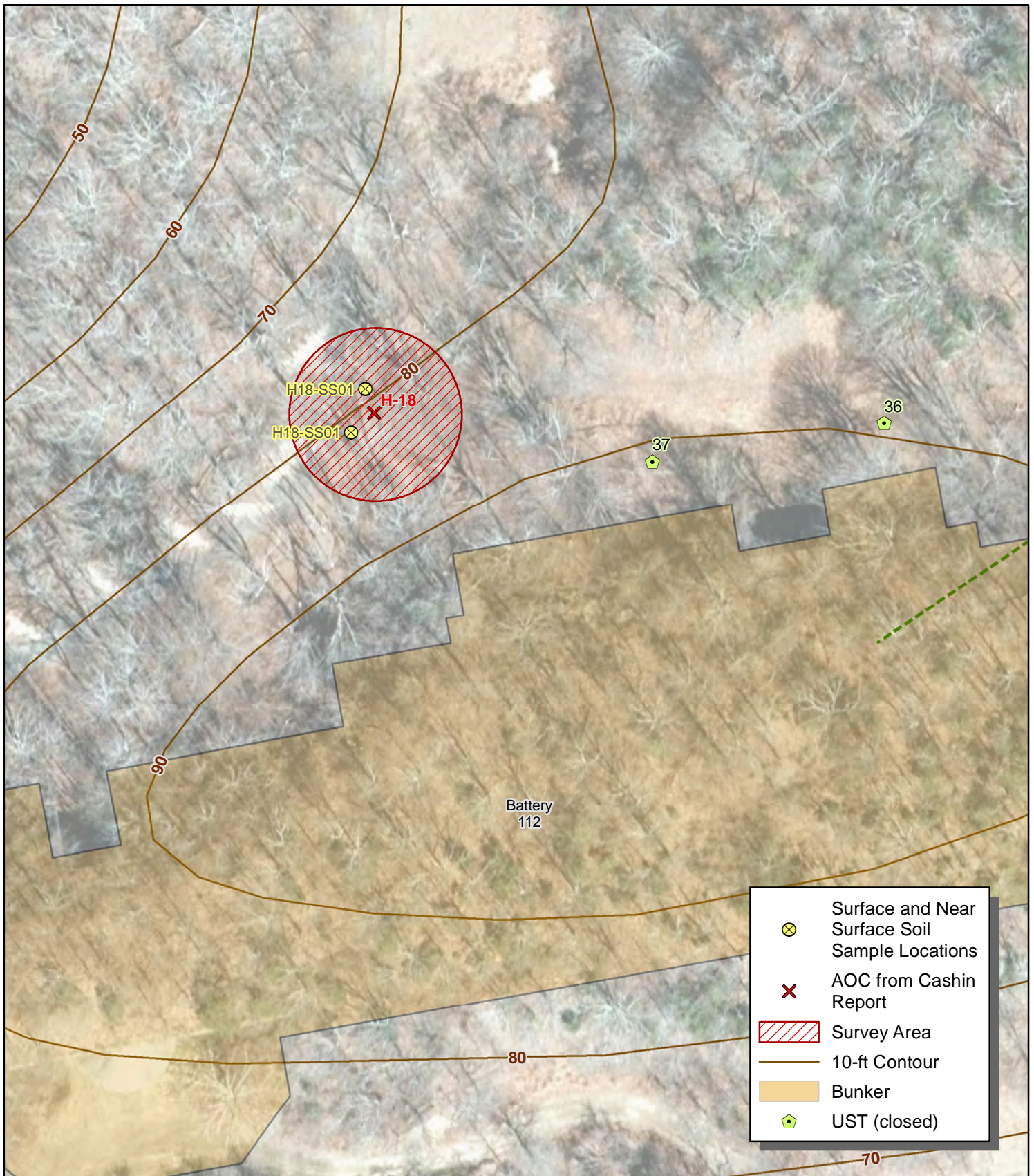


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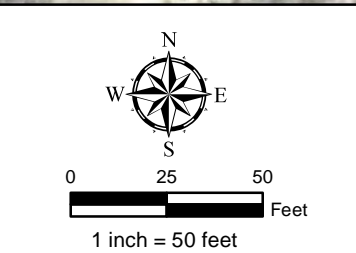
H-17 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-32
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	Surface and Near Surface Soil Sample Locations
	AOC from Cashin Report
	Survey Area
	10-ft Contour
	Bunker
	UST (closed)

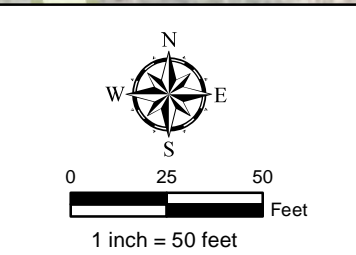
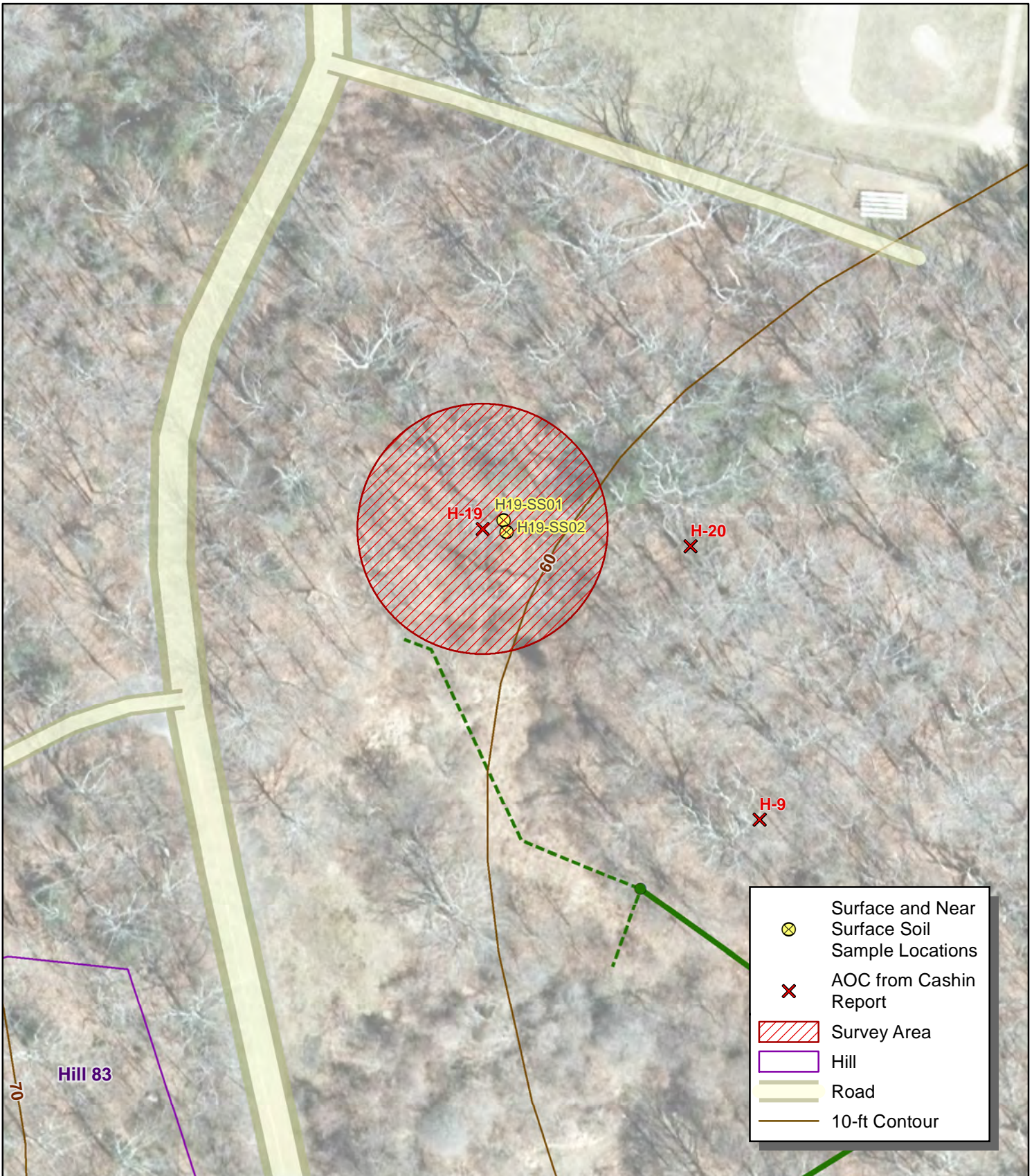


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H-18 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-33
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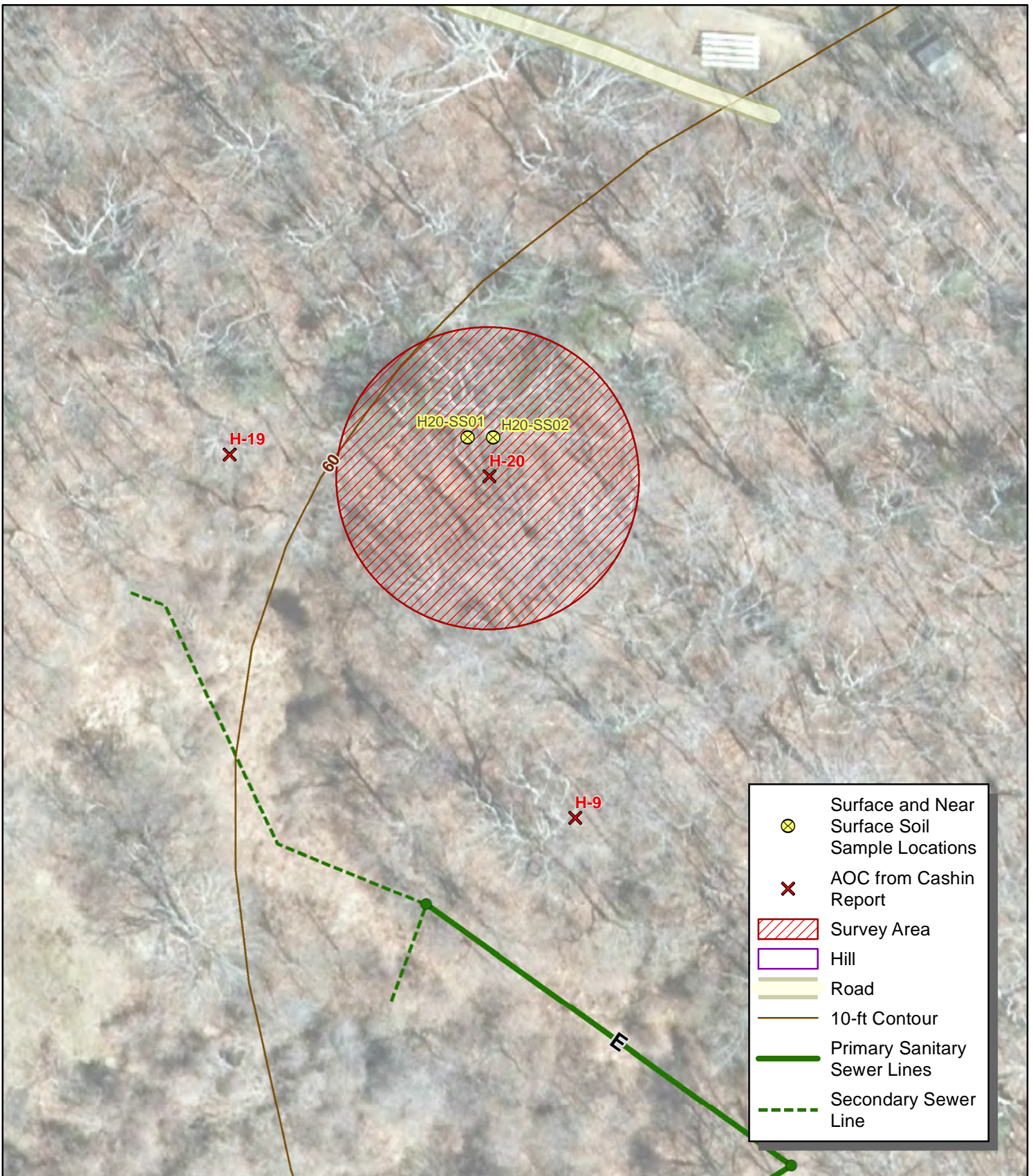


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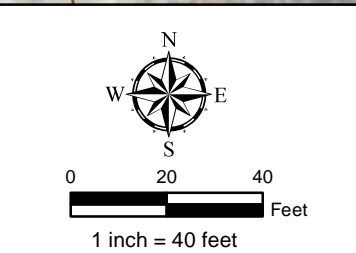
H-19 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-34
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	Surface and Near Surface Soil Sample Locations
	AOC from Cashin Report
	Survey Area
	Hill
	Road
	10-ft Contour
	Primary Sanitary Sewer Lines
	Secondary Sewer Line

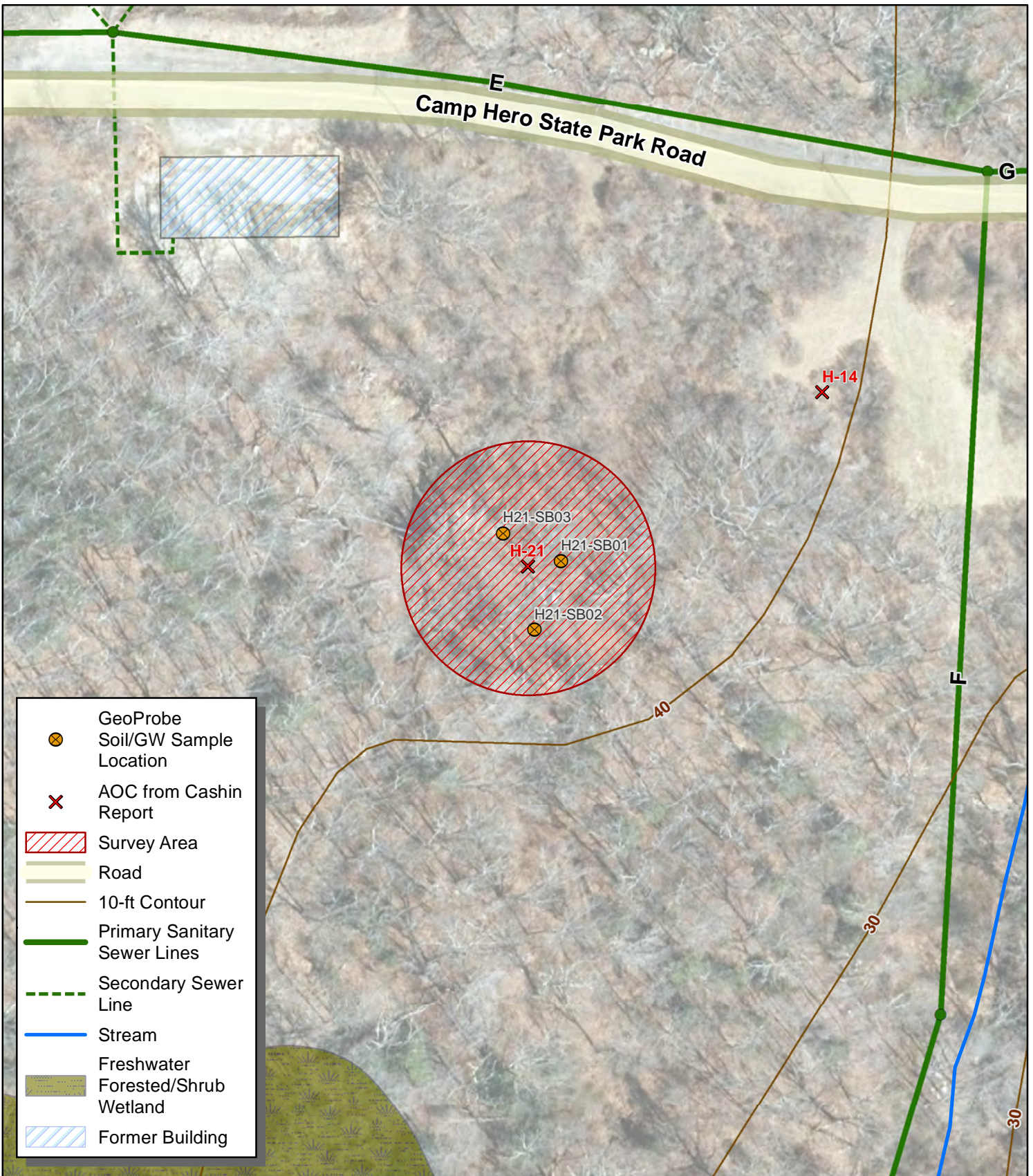












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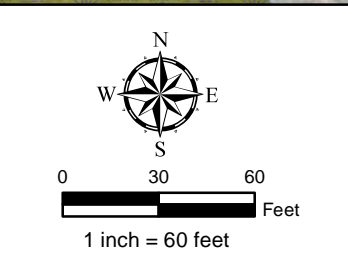
H-20 Phase 1 RI Sampling Locations

Camp Hero Phase I Field Investigation Report

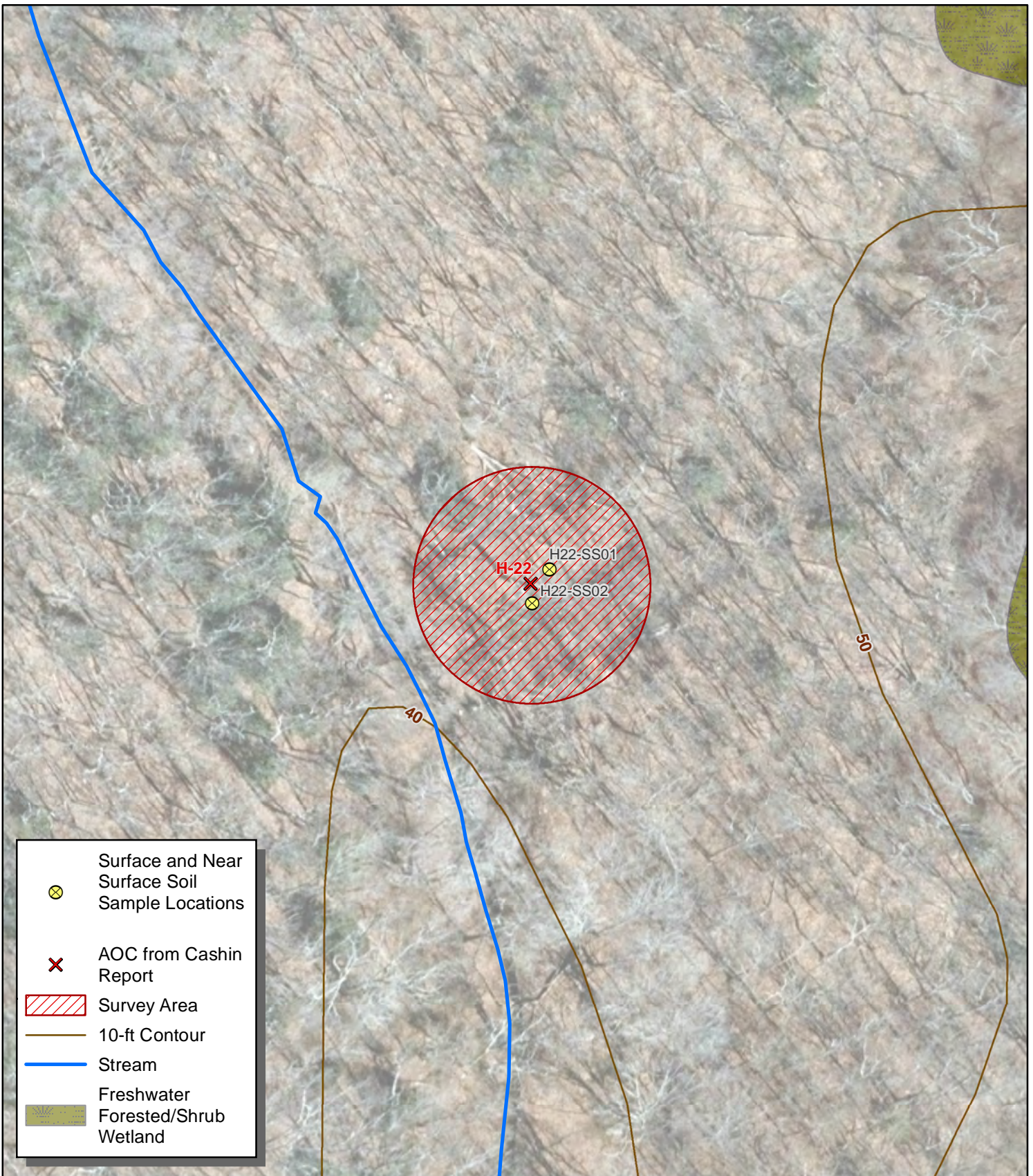
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-35
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-  GeoProbe Soil/GW Sample Location
-  AOC from Cashin Report
-  Survey Area
-  Road
-  10-ft Contour
-  Primary Sanitary Sewer Lines
-  Secondary Sewer Line
-  Stream
-  Freshwater Forested/Shrub Wetland
-  Former Building



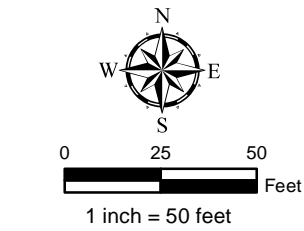
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H-21 Phase 1 RI Sampling Locations			
Camp Hero Phase I field Investigation Report			
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: September 2016	Figure 4-36



-  Surface and Near Surface Soil Sample Locations
-  AOC from Cashin Report
-  Survey Area
-  10-ft Contour
-  Stream
-  Freshwater Forested/Shrub Wetland



MAP LOCATION



NAD 1983 StatePlane Long Island FIPS 3104



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H-22 Phase 1 RI Sampling Locations

Camp Hero Phase 1 Field Investigation Report

PROJECT NO.

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DATE:

60443903

DDS

September 2016

Figure 4-37

Attachment B

Tables

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Table 2-1. Phase I Soil and Liquid IDW Results

Analysis	Method	Toxicity Characteristic Regulatory Level	Units	Soil IDW CH-ST-082016		Liquid IDW CH-WW-082016	
				Result	Qualifier	Result	Qualifier
Reactivity, Corrosivity, Ignitability, pH							
Cyanide, Reactive	SW 7.3.3.2	250	mg/kg	1.0	UQ	0.050	UQ
Ignitability	SW 1030	-	mm/sec	0.1	U	70	U
Sulfide, Reactive	SW 7.3.4.2	500	mg/kg	2.0	UQ	0.10	UQ
Hydrogen Ion (pH)	SW 9045D	2 ≤ pH ≤ 12.5	pH	7.64		9.83	
Temperature	NA	-	°C	25.4		-	
TCLP: RCRA Metals, ICP/OES							
Arsenic	SW 6010C	5000	µg/L	37	JX	23	JG
Barium	SW 6010C	100000	µg/L	550		220	
Cadmium	SW 6010C	1000	µg/L	93		1.9	J
Chromium	SW 6010C	5000	µg/L	140	X	98	
Lead	SW 6010C	5000	µg/L	93	JX	36	J
Selenium	SW 6010C	1000	µg/L	30	UX	30	U
Silver	SW 6010C	5000	µg/L	120		10	U
TCLP: RCRA Metals, Mercury							
Mercury	SW 7470A	200	µg/L	0.1	U	0.26	
TCLP: RCRA SVOCs							
2,4,5-Trichlorophenol	SW 8270D	400000	µg/L	12	U	12	U
2,4,6-Trichlorophenol	SW 8270D	2000	µg/L	5.0	U	5.0	U
2,4-Dinitrotoluene	SW 8270D	130	µg/L	5.0	U	5.0	U
2-Methylphenol	SW 8270D	200000	µg/L	5.0	U	5.0	U
3/4 Methylphenol	SW 8270D	200000	µg/L	25	U	25	U
Hexachlorobenzene	SW 8270D	130	µg/L	5.0	U	5.0	U
Hexachlorobutadiene	SW 8270D	500	µg/L	5.0	U	5.0	U
Hexachloroethane	SW 8270D	3000	µg/L	5.0	U	5.0	U
Nitrobenzene	SW 8270D	2000	µg/L	12	U	12	U
Pentachlorophenol	SW 8270D	100000	µg/L	5.0	UY	5.0	UY
Pyridine	SW 8270D	25000	µg/L	120	UXY	120	UY
TCLP: RCRA VOCs							
1,1-Dichloroethene	SW 8260B	700	µg/L	120	U	120	U
1,2-Dichloroethane	SW 8260B	500	µg/L	120	U	120	U
1,4-Dichlorobenzene	SW 8260B	7500	µg/L	120	U	120	U
Benzene	SW 8260B	500	µg/L	120	U	120	U
Carbon tetrachloride	SW 8260B	500	µg/L	120	U	120	U
Chlorobenzene	SW 8260B	100000	µg/L	120	U	120	U
Chloroform	SW 8260B	6000	µg/L	120	U	120	U
Methyl ethyl ketone	SW 8260B	200000	µg/L	1000	U	1000	U
Tetrachloroethene	SW 8260B	700	µg/L	120	U	120	U
Trichloroethene	SW 8260B	500	µg/L	120	U	120	U
Vinyl chloride	SW 8260B	200	µg/L	120	U	120	U

Notes

G: ICB/CCB result is greater than the MDL.

J: Estimated result. Greater uncertainty is associated with this result and data reported is estimated.

Q: % REC exceeded control limits. When applied to sample analytes, denotes an associated LCS recovery that exceeded control limits.

U: The analyte concentration is less than the DL. The result is reported as less than the LOD.

X: Matrix spike recovery for the noted analyte exceeded control limits. Applied to the MS/MSD parent sample.

Y: Percent Difference/Drift in the associated CCV exceeded acceptance criteria.

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Table 2-2. Samples with Qualifications due to Cooler Delivery, Hold Time, Temperature and/or PAH SIM Dilution Concerns:

Work order	Sample #	Sample ID	Analysis	Method No	Dilution/Re-analysis	Analyte	Analytical Run #	Analysis date	Notes
1606387	004B	WDS-SB24-GW	SW_8270A-LL	8270D-MOD	Re-extract, Re-analysis	All analytes	87381	6/30/2016 17:00	Sample was re-extracted and reanalyzed due to poor surrogate recoveries in the original analysis. Prep Method hold time was exceeded by 10.724 days for re-extraction. Both original analysis and re-analysis are reported as requested.
1606389	014A	BG01-SS05-01	SW_8270S-SIM	8270D SIM	D3 - 50x	Benz(a)anthracene Benzo(b)fluoranthene Chrysene Fluoranthene Phenanthrene Pyrene	87679	7/27/2016 @ 11:35	
1606422	008B	WDS-SB21-GW	SW_8270A-LL	8270D-MOD	Re-extract, Re-analysis	All analytes	87381	6/30/2016 @ 17:26	Samples re-extracted and analyzed due to surrogate failures in initial run. Samples were prepped past the recommended hold time by 7.88 days. Both Re-analysis and original analysis were reported.
1606506	003A	034-SS02-01	SW_8270S-SIM	8270D SIM	D1 - 20x	Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene Phenanthrene Pyrene	87818	8/2/2016 @ 14:53	
	003A	034-SS02-01	SW_8270S-SIM	8270D SIM	D2 - 200x	Fluoranthene	87818	8/2/2016 @ 16:44	
1606506	004A	034-SS02-02	SW_8270S-SIM	8270D SIM	D1 - 3x	Benzo(b)fluoranthene Fluoranthene Pyrene	87818	8/2/2016 @ 15:21	
1606512	012A	WDS-SB08-05	SW_8270S-SIM	8270D SIM	D1 - 3x	Benzo(a)anthracene Benzo(b)fluoranthene Chrysene Fluoranthene Pyrene	87836	8/4/2016 @ 14:43	
1606529	005B	AST35-SB04-GW	SW_8270A-LL	8270D-MOD	Re-extract, Re-analysis	All analytes	87381	6/30/2016 @ 18:46	Re-Prep Method hold time was exceeded by 5.859 day(s).
1606631	003B	WDS-SB01-GW	SW_8270A-SIM		D2 - 50x	1-Methylnaphthalene 2-Methylnaphthalene Acenaphthylene Fluorene Phenanthrene Naphthalene	87836	8/4/2016 @ 18:29	
1606631	003B	WDS-SB01-GW	SW_8270A-SIM		D3 - 200x		87854	8/5/2016 @ 14:52	
1606631	016 - all	H14-SB01-GW	CANCELED						Cooler # 061 - Received outside temp
1606631	017 - all	H14-SB03-GW	CANCELED						Cooler # 061 - Received outside temp
1606631	018 - all	MP-SB03-GW	CANCELED						Cooler # 061 - Received outside temp
1606631	019 - all	TB-GW-061716-02	CANCELED						Cooler # 061 - Received outside temp
1606675	014A	H16-SB01-GW	SW_8260A	8260C	5x	All analytes	87322	7/12/2016 @ 19:02	Inject issues due to large amount of solid materials in the water vials.
1606936	001A	H17-SB02-GW	SW_8260A	8260C					Cooler received outside temp, due to FedEx
	001B		SW_8270A-SIM	8270D SIM	3x	All analytes	87853	7/25/2016 @ 17:14	Prep outside method recommended hold time - FEDEX, Received outside temp
	001B		SW_8270A-LL	8270D-MOD	1x	All analytes	87828	8/3/2016 @ 16:02	Prep outside method recommended hold time - FEDEX, Received outside temp
	001C		SW_8082A	8082A					Cooler received outside temp, due to FedEx
	001D		SW_6020A	6020A					Cooler received outside temp, due to FedEx
	001D		SW_6020A-SA	6020A-SA					Cooler received outside temp, due to FedEx
1606936	002A	TB-GW-062116-03	SW_8260A	8260C					Cooler received outside temp, due to FedEx
1608142	001A	H11-SB02-06	SW_8270S-LL	8270D	Re-analysis	All PNAs	87828	8/3/2016 16:51	Originally 1606286-005A

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Table 3-1. Summary of Phase I Investigation Activities and Analytical Samples

AOC ID	AOC Name	Reason for Concern	Geoprobe Borings	Boring/ Sample Depth	Sample Quantities						Analyses	Additional Investigation Activities and Other Notes
					SB	SS	GW	CC	WP	LC		
B113	Battery 113	Oil Staining Tanks, Drums, Pits					1	1		2	CC, WP: PCBs LC01: Fuel Characterization, LC02: TCLP VOC, SVOC, PCBs, metals	
203	Former Building 203	Possible solvent and residual petroleum	5	*A	9		5				Soil and GW: VOC, SVOC, PCBs, Metals	3 Piezometers Installed
2010	Building 2010 (UST 30)	Pb in Background	2	*B	8		1				Soil and GW: Lead	GW not encountered in 1 of 2 borings
F100C	Building F100C (UST 34)	Pb in Background	2	*B	8		2				Soil and GW: Lead	
AST35	AST 35/H-13	Tank #35, 200,000 gallon tank associated with reported spill	4	*A	5	2	4				Soil: STARS for fuel oil VOCs and SVOCs GW: VOCs, SVOCs	
FPH	Fuel Pump House and Distribution Line for AST-35	Fuel Line	4	*A	4	3	4				Soil: STARS for fuel oil VOCs and SVOCs GW: VOCs, SVOCs	Geophysical Survey Conducted
STA	Building 20 (Tank A)	Suspected former tank location									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
STB	Building 22 (Tank B)	Suspected former tank location 1	4	*C	4	3	2				Soil: STARS for fuel oil VOCs and SVOCs GW: VOCs, SVOCs	Geophysical Survey Conducted, Test Holes
STH	Building 109 (Tank H)	Possible Tank Identified during Geophysics									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted, Test Holes
STC	Building 2 (Tank C)	Suspected former tank location									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted, Test Holes
STD	Building 104R (Tank D)	Suspected former tank location									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
STE	Building 3001 (Tank E)	Suspected former tank location									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
STF	Pump House (Tank F)	Suspected former tank location									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
STG	Pump House (Tank G)	Suspected former tank location									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
112	Battery 112 (UST 36, 37)	Oil Staining										No Access Available
107	Building 107	Electrical					1	1		1	WP, CC, LC: PCBs	
201	Building 201	Cesspool Electrical	1	*A	2		0				Soil and GW: VOC, SVOC, PCBs, metals	GW not encountered in boring No Access Available
WDS	Abandoned Waste Disposal Systems (Site-wide)	Hazardous Material Disposal	25	*D	24	3	22				Soil and GW: VOC, SVOC, PCBs, metals	GW not encountered in all borings
		Hydraulic Lift	1	*E	1		1				Soil: STARS for fuel oil VOCs and SVOCs GW: VOCs, SVOCs	
MP	Motor Pool	Ordinance Repair	1	*I	1	1	1				Soil: STARS for fuel oil VOCs and SVOCs, Energetics GW: VOCs, SVOCs, Energetics	
		Cess Pool	1	*I	1	1	1				Soil: STARS for fuel oil VOCs and SVOCs, PCBs, Energetics GW: VOCs, SVOCs, PCBs, Energetics	
		Existing well (untreated tap)					1				GW: VOCs, SVOCs, PCBs, Energetics, Metals	
EFO	Engineering Field Office	Ordinance Repair	1	*I	1	1	1				Soil: Energetics GW: Energetics	
034	Former Building 34	Former Building, Construction Debris	1	*A	1	1	1				Soil and GW: PAHs, PCBs, and Metals	
		Drainage Ditch			4	4					Soil: PAHs, PCBs, and Metals	
H1	H-1	Drums		*F	2	2					Soil and LC: VOC, SVOC, PCBs, metals	
H2	H-2	Drums		*F	2	2					Soil and LC: VOC, SVOC, PCBs, metals	
H3	H-3	Drums		*F	2	2					Soil and LC: VOC, SVOC, PCBs, metals	
H4	H-4	Construction Debris	3	*I	2	3	3				Soil and GW: lead, PCBs	
		Drums		*F	2	2					Soil and LC: VOC, SVOC, PCBs, metals	
H5	H-5	Construction Debris		*F	2	2					Soil: Lead and PCBs	
H6	H-6	Construction Debris	3	*I		3	3				Soil and GW: lead, PCBs	
H7	H-7	Boilers										AOC could not be located
H8	H-8	Boilers										AOC could not be located
H9	H-9	Boilers		*G		1					Soil and GW: PAHs and Metals	
H11	H-11	Former Power Plant	2	*I	2	2	2				Soil and GW: PAHs, Metals, PCBs	
H12	H-12	Sewage Ejector Station	1	*I	1	1	1				Soil and GW: VOCs, SVOCs, PCBs, metals	
H14	H-14	Coal Storage Area	3	*I	3	3	2				Soil and GW: PAHs and Metals	GW not encountered in all borings
H15	H-15	Coal Storage Area	3	*I	3	3	0				Soil and GW: PAHs and Metals	GW not encountered in any borings
H16	H-16	Sewage Treatment Area	1	*I	1	1	1				Soil and GW: VOCs, SVOCs, PCBs, metals	
H17	H-17	Open Pits	3	*H	3	3	2				Soil and GW: VOC, SVOC, PCBs, metals	GW not encountered in all borings
H18	H-18	Drums		*F	2	2					Soil and LC: VOC, SVOC, PCBs, metals	
H19	H-19	550 gal Storage Tank		*G		1					Soil, GW, and LC: VOC, PAHs, Metals	
H20	H-20	Drums		*F	2	2					Soil and LC: VOC, SVOC, PCBs, metals	
H21	H-21	Open Pits	3	*I	3	3	3				Soil and GW: VOC, SVOC, PCBs, metals	
H22	H-22	Drums		*F	2	2					Soil, GW, and LC: VOC, SVOC, PCBs, metals	
216	Battery 216	Possible Debris									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
P113	Plotting Room 113	Possible Debris	3	*C	3	2	3				Soil: STARS for fuel oil and gasoline VOC, SVOC, Lead GW: VOC, SVOC, Lead	Geophysical Survey Conducted
AGC3	Camp Hero State Park Bluffs	Debris									<i>Geophysical survey indicated no samples necessary</i>	Geophysics via Metal Detector, Removed Debris (old boiler) from Bluff
AGC1	AGC Site 1	Debris									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
AGC2	AGC Site 2	Debris									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
AGC4	AGC Site 4	Debris									<i>Geophysical survey indicated no samples necessary</i>	Geophysical Survey Conducted
BG	Background Samples		16	*J	32	30					Soil: Metals and PAHs	

- Notes**
- AOC Area of Concern
 - AST Aboveground Storage Tank
 - ID Identification
 - N/A Not Applicable
 - PCB Polychlorinated Biphenyls
 - STARS [NYSDEC] Spills, Technology, and Remediation Services
 - SVOC Semi-Volatile Organic Compound
 - UST Underground Storage Tank
 - VOC Volatile Organic Compound

- Media Type Codes**
- GW Groundwater Sample
 - SB Subsurface Soil Sample
 - SS Surface Soil
 - WP Wipe Sample
 - CC Concrete Chip Sample
 - LC Liquid Characterization Sample

- Boring/Sample Depth Classifications**
- A Boring to perched aquifer or max 25 ft bgs. Two SB per boring – one from upper portion at staining/elevated PID, one at depth
 - B Boring to depth of former UST (7 ft bgs) or the perched water table. Up to 4 SB per boring: first 0 - 4 ft bgs (homogenize), then additional sample every 1 ft interval from 4 ft bgs to depth (4 - 5, 5 - 6, 6 - 7 ft bgs)
 - C Boring to perched aquifer. Two SB per boring – one from the upper portion and one at the depth of the suspected UST
 - D Boring to specific depth - see Table 2-2 of the SAP. One SB per boring at depth
 - E Boring to depth of former lift, approx. 8 - 10 ft bgs (at the interface of the fill and native soil). Two SB per boring – one from upper portion, one at depth
 - F One SS sample (0 - 1 ft bgs) and one near-surface soil sample (1 - 2 ft bgs) at 2 locations
 - G One SS sample (0 - 1 ft bgs). Per RI WP, one geoprobe may have been needed, but was not necessary based on site survey.
 - H Boring to 35 ft bgs in attempt to reach groundwater. One SS and one SB per boring.
 - I Boring to perched aquifer. Two samples per boring – one SS from 0 - 1 ft bgs, one SB at depth. Third sample would have been collected if staining/elevated PID readings were noted.
 - J Borings to 10 ft bgs or perched aquifer (whichever encountered first). Two SB per boring: 4-5 ft bgs, 9-10 ft bgs or 1-2 ft above GW, if GW is above 10 ft bgs One SS from 0 - 1 ft from each boring.

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Attachment C

Coordination with Stakeholders

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DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090
March 29, 2016

REPLY TO
ATTENTION OF

Programs and Project Management Division

Ms. Ruth L. Pierpont, Director
New York State Office of Parks, Recreation, and Historic Preservation/
State Historic Preservation Office
Pebbles Island State Park
P.O. Box 189
Waterford, New York 12188-0189

RE: Former Camp Hero, Formerly Used Defense Site (FUDS) Property # C02NY0024,
Montauk, New York

Dear Ms. Pierpont:

We are planning to conduct a remedial investigation (RI) at the former Camp Hero, now known as Camp Hero State Park, which is about 5 miles east of the village of Montauk (see enclosed site map). Please note that this initial field sampling is the first phase of a two-phase study, both of which will be coordinated with your office. We expect that Phase 1 of the investigation at Camp Hero State Park will have no effect upon significant historic properties in accordance with Section 106 of the National Historic Preservation Act (NHPA) and implementing regulations at 36 CFR 800. We would appreciate your concurrence with this determination.

The former Camp Hero, consisting of 469 acres, was established in early 1942 as a coastal defense installation with three batteries (Battery 112, 113, and 216) and supporting facilities that included barracks, mess halls, hospital facilities, a motor repair shop, a recreation facility, sentry boxes, and water supply and sewage facilities. In 1952, the Air Force acquired a portion of Camp Hero that became known as the Montauk Air Force Station. Camp Hero site lands were transferred to State, local and Federal agencies between 1974 and 1984 and the Air Force station was closed in 1982. Currently, Camp Hero State Park (415.35 acres) is owned by the NY State Office of Parks, Recreation, and Historic Preservation.

The purpose of our two-phased investigation is to assess if former Department of Defense (DoD) activities at Camp Hero may have resulted in adverse environmental conditions. The purpose of Phase 1 is to determine the presence or absence of contamination at various areas of Camp Hero, while Phase 2 is to determine the nature and extent of contamination and whether unacceptable risks to human and ecological

health are present. This correspondence pertains to Phase 1 activities only; Phase 2 activities will be coordinated with your office at a later date.

Forty-four areas, identified in Table 6-1 (Enclosure 1) will be investigated; the investigation will consist primarily of soil and groundwater borings; sampling of liquid (from storage tanks identified); concrete chip sampling; as well as geophysical surveys for the locating underground tanks. In some cases, wipe samples will be tested for polychlorinated biphenyls (PCBs), and site/visual surveys will be conducted to locate boilers, drums, debris, and pits. Additionally, four areas have been selected along the bluffs (see attached figure) for visual inspection and use of a hand-held magnetometer to determine if these locations have been used as landfill or dumping areas. These areas were selected based upon an examination of historic aerial photography and earlier removal actions conducted in 2000 and 2002. Anomalies will be positively identified and avoided during Phase 1.

The Camp Hero State Park study area as a whole is potentially eligible for listing on the National Register of Historic Places (NRHP). In late 1960, an advanced Specific Frequency Diversity Search Radar was built to provide surveillance data of air traffic in the area for the Montauk Air Force Station's Aircraft Control and Warning Squadron. This radar, known as the Army-Navy/Fixed Pulse Radar Surveillance-35 Radar Tower and Antenna (AN/FPS Radar Tower and Antenna) was listed on the NRHP in 2002. Additionally, there are undisturbed areas of archaeological sensitivity within the State Park in addition to significant individual historic properties according to the NY State Historic Preservation Office database.

This is a limited sampling investigation consisting of visual, geophysical, surface, subsurface and groundwater and concrete chip samples in previously disturbed contexts. Impacts to historic properties are not expected during this phase. Access to Batteries 112 and 113 and Buildings 107 and 201 will be assessed; however, no structural impacts to the integrity of these structures will be permitted. At Building 201, the AN/FPS Radar Tower and Antenna, site assessment will consist of a survey to determine access, identify any staining, three PCB wipe samples, and one boring at any adjacent cesspool. Again, we expect Phase 1 of the investigation at Camp Hero State Park will have no effect upon significant historic properties in accordance with Section 106 of the NHPA and implementing regulations at 36 CFR 800. We would appreciate your concurrence with this determination.

If you have any questions regarding this matter, please contact me at 917-790-8235 or Mr. Marc Paiva, the Project Archaeologist and Tribal Liaison at 978-318-8796.

Sincerely,


Gregory J. Goepfert
Project Manager

Enclosures

Same Letter Sent (with enclosures):

Ms. Daniel Collins, Vice Chairman, Shinnecock Tribal Nation (by email)

Mr. Thomas Dess, Superintendent, Camp Hero State Park

CC:

Mr. Paiva

Mr. Penko

Ms. Cullen

Reading File

Eng/Plng Division File

**Table 6-1
Areas of Concern Summary Table**

Area of Concern	Additional Site Names	Figure	Reason for Concern	Potential Impact	Phase 1
Battery 113	Bunker-B1, Battery Dunn	Figure 6-1	Oil Staining	PCBs	Assessment for access, 3 concrete chip samples to be analyzed for PCBs.
			Tanks, Drums, Pits	Hazardous Materials	Assessment for access, site survey to identify use of tanks and waste drums, 4 liquid samples for hazardous material characterization (if applicable) from tanks and drums, water samples taken from pits (if applicable).
Former Building 203	N/A	Figure 6-2	Possible Ethylene Glycol Release	Solvent(s), including ethylene glycol	5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep). Up to 5 piezometers to determine groundwater flow.
Building 2010	Cashin #39, Water Meter	Figure 6-3	Lead in Soil	Lead	2 Geoprobe® borings, 2 groundwater samples, 4 soil samples (2 shallow and 2 deep)
Building F100C	Cashin #40, Well House	Figure 6-4	Lead in Soil	Lead	2 Geoprobe® borings, 2 groundwater samples, 4 soil samples (2 shallow and 2 deep)
AST-35	H-13	Figure 6-5	Tank #35, 200,000 gallon tank associated with reported spill	Petroleum	4 Geoprobe® borings to perched water table, 8 soil samples (4 deep and 4 shallow), 4 groundwater samples.
Distribution Line for AST-35	N/A	Figure 6-6	Distribution line connected to AST-35	Petroleum	6 Geoprobe® borings to perched water table, 12 soil samples (6 deep and 6 shallow), 6 groundwater samples.
Building 20 (Tank-A)	Cashin #14, Fire Department	Figure 6-7	Suspected former tank location	Petroleum	Verify Tank-A removal via magnetometer, up to 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep).
Building 22 (Tank-B)	Cashin #22, Kitchen/Office	Figure 6-8	Suspected former tank location	Petroleum	Verify tank removal via magnetometer, up to 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep).
Building 2 (Tank-C)	Cashin #24, Barracks	Figure 6-9	Suspected former tank location	Petroleum	Verify tank removal via magnetometer, up to 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep).

**Table 6-1
Areas of Concern Summary Table**

Area of Concern	Additional Site Names	Figure	Reason for Concern	Potential Impact	Phase 1
Building 104R (Tank-D)	Cashin #33, Commissary,	Figure 6-10	Suspected former tank location	Petroleum	Verify tank removal via magnetometer, up to 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep).
Building 3001 (Tank-E)	Cashin #47, AT&T Building, Lilco Building, State Park Police Residence	Figure 6-11	Suspected former tank location	Petroleum	Magnetometer survey to verify UST. If UST location is confirmed: 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep). One additional groundwater sample from existing well.
Pump House (Tank F)	Near Battery 216/Bunker 4	Figure 6-12	Suspected former tank location, Hazardous Materials	Petroleum	Magnetometer survey to verify UST. If UST location is confirmed: 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep).
Pump House (Tank G)	Near Well 4	Figure 6-13	Suspected former tank location	Petroleum	Magnetometer survey to verify UST. If UST location is confirmed: 5 Geoprobe® borings, 5 groundwater samples, 10 soil samples (5 shallow and 5 deep).
Battery 112	Bunker-3	Figure 6-14	Oil Staining	PCBs	Assessment for access to Battery, site survey to identify any tanks or staining, 3 concrete chip samples.
Building 107	Cashin #5, Electrical Sub-station	Figure 6-15	Electrical	PCBs	Assessment for access to basement, verify liquids in transformers, sample transformer fluids (if applicable) and sample for PCBs.
Building 201	Cashin #1, Main Radar Tower	Figure 6-16	Electrical	PCBs	Assessment for access, Site Survey to identify staining, 3 PCB wipe samples. 1 Geoprobe® boring at cesspool.
Abandoned Waste Disposal Systems (Site-wide)	N/A	Figure 6-17	Hazardous Material Disposal	Hazardous Materials	27 Geoprobe® borings, 1 soil sample (specific depths), and 1 groundwater sample at each location (27 total soil and groundwater samples).
Motor Pool	N/A	Figure 6-18	Hydraulic lift, Cesspool, Ordinance Repair	Petroleum, Hazardous Materials, Munitions Constituents	3 Geoprobe® borings, 3 groundwater samples and 6 soil samples (3 shallow and 3 deep), one additional GW sample from existing non-potable supply well (NPSW).

Table 6-1
Areas of Concern Summary Table

Area of Concern	Additional Site Names	Figure	Reason for Concern	Potential Impact	Phase 1
Engineering Field Office	Adjacent to Motor Pool	Figure 6-19	Ordinance Repair	Munitions Constituents	1 Geoprobe® boring, 1 groundwater sample, 2 soil samples (1 shallow and 1 deep).
H-1, H-2, H-3, H-18, H-20, H-22	Area of Possible DoD Related Disposal	Figures 6-20, 6-21, 6-22, 6-35, 6-37, 6-39	Drums	Hazardous Materials	Site survey to identify drums, 12 surface and 12 near-surface soil samples (2 surface and near-surface at each H-location). If applicable, sample liquid in drums.
H-4 and H-6	Area of Possible DoD Related Disposal	Figures 6-23, 6-25	Construction Debris	Hazardous Materials	Site survey to identify debris, 6 Geoprobe® borings, 6 groundwater samples, 12 soil samples.
H-5	Area of Possible DoD Related Disposal	Figure 6-24	Construction Debris	Hazardous Materials	8 surface and 8 near-surface soil samples under debris locations; if applicable: sample liquid in drums.
H-7, H-8, H-9	Area of Possible DoD Related Disposal	Figures 6-26, 6-27, 6-28	Boilers	Petroleum	Site Survey to identify boilers, 3 surface soil samples (1 under each). Based on site survey, 3 Geoprobe borings (1 at each) may be necessary (2 subsurface soil samples, 1 groundwater sample per boring).
H-11	Former Power Plant	Figure 6-29	Suspected Contamination	Petroleum, Metals, PCBs	2 Geoprobe® borings, 2 groundwater samples, 4 soil samples (2 shallow and 2 deep).
H-12	Sewage Ejector Station	Figure 6-30	Suspected Contamination	Hazardous Materials	1 Geoprobe® boring, 1 groundwater sample, and 2 soil samples (1 shallow and 1 deep).
H-14, H-15	Coal Storage Area	Figures 6-31, 6-32	Suspected Contamination	PAH	6 Geoprobe® borings (3 borings at each location), 6 groundwater samples and 12 soil samples (6 shallow and 6 deep).
H-16	Sewage Treatment Area	Figure 6-33	Suspected Contamination	Hazardous Materials	Site Survey, 3 Geoprobe® borings, 3 groundwater samples and 6 soil samples (3 shallow and 3 deep).
H-17, H-21	Area of Possible DoD Related Disposal	Figures 6-34, 6-38	Open Pits	Hazardous Materials	Site Survey to identify pits, 6 Geoprobe® borings (3 at each location), 6 groundwater samples and 12 soil samples (6 shallow and 6 deep).

**Table 6-2
Areas of Concern Summary Table**

Area of Concern	Additional Site Names	Figure	Reason for Concern	Potential Impact	Phase 1
H-19	Area of Possible DoD Related Disposal	Figure 6-36	550 gallon Storage Tank	Hazardous Materials	Site Survey to identify tank, 2 surface soil samples, liquid characterization if applicable. Based on site survey, 2 Geoprobe borings may be necessary (2 subsurface soil samples, 1 groundwater sample per boring) .
Battery 216	N/A	Figure 6-40	Potential unknown storage or vaults	Potential release to environment.	Geophysics around building.
Plotting Room 113	N/A	Figure 6-41	Potential unknown storage or vaults	Potential release to environment	Geophysics around building.
Camp Hero State Park Bluffs	N/A	Figure 6-42	Metal Debris	Metal debris hazards	Visual Survey, remove metal debris.
Background Samples	N/A	Figure 1-2	N/A	N/A	10 Geoprobe® borings (3 borings at 2 locations), 20 soil samples (10 shallow and 10 deep)

N/A not applicable
 PAH polynuclear aromatic hydrocarbon
 DoD Department of Defense, United States
 PCB Polychlorinated biphenyls



DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

March 29, 2016

REPLY TO
ATTENTION OF

Programs and Project Management Division

David Stilwell, Field Supervisor
U.S. Fish and Wildlife Service
New York Field Office
3817 Luker Road
Cortland, New York 13045

Dear Mr. Stilwell:

We are planning to conduct a remedial investigation (RI) at the former Camp Hero, a formerly used defense site (FUDS), which is located on the eastern tip of the south fork of Long Island, New York (NY), approximately 5 miles east of the Village of Montauk. The former Camp Hero, now known as Camp Hero State Park, was established in early 1942 as a Coastal Defense Installation; the facility changed ownership within the military multiple times over the course of the following decades. Between 1974 and 1984, site lands were transferred to State, Local, and other Federal agencies, and the facility was permanently closed in 1982. Camp Hero State Park is operated by the New York State Office of Parks, Recreation and Historic Preservation.

The purpose of our two-phased investigation is to assess if former Department of Defense (DoD) activities at Camp Hero may have resulted in adverse environmental conditions. Forty-four Areas of Concern (AOCs) have been identified. These sites included former waste disposal and coal storage areas, abandoned drum locations, and former storage tanks. The AOCs are shown on Figure 1.

The RI technical approach will consist of two phases of field sampling investigation (Phase 1 and Phase 2). The primary objective of the Phase 1 investigation is to determine the presence or absence of contamination at the Camp Hero AOCs. The primary objective of the Phase 2 investigation is to determine the nature and extent of target constituents in soil, groundwater, surface water, and sediment at the Camp Hero AOCs and determine if there are unacceptable risks to human health and ecological health associated with exposure to related constituents. Proposed sampling activities at each AOC during Phase 1 are summarized in the attached table.

At most sites GeoProbe borings will be conducted to collect soils and groundwater samples. Care will be taken to minimize disturbance of vegetation to access the AOCs. Cutting of large trees (> 3" dbh) and snags will be avoided. Some sampling will occur inside abandoned buildings. Sampling activities will be suspended and the Long Island Field Office and New York Department of Environmental Conservation contacted if any bats are

encountered in the buildings. Phase I field work is expected to begin in April and be completed by June, 2016.

Please submit a letter with any concerns you have regarding the potential impacts of field sampling activities on threatened or endangered species pursuant to the Federal Endangered Species Act.

If any additional information is required please contact me at (917) 790-8235 or Mr. Michael Penko of the New England District Environmental Resources Section at (978) 318-8139.

Sincerely,



Gregory J. Goepfert
Project Manager

Enclosure

Cc:

Steve Papa, USFWS Long Island Field Office
Thomas Dess, Superintendent, Montauk State Park
Megan Cullen, New England District
M. Penko, New England District
Megan Donahue, AECOM



Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

May 3, 2016

Mr. Marcos Paiva
Archaeologist
US Army Corps of Engineers
696 Virginia Road
Concord, MA 01742

Re: USACE
Former Camp Hero Remedial Investigation, Camp Hero State Park
Camp Hero Road, Easthampton, Suffolk County
16PR02102

Dear Mr. Paiva:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

As noted, the radar installation on the former base has been listed in the National Register of Historic Places and we believe the remainder of the camp may be eligible for the register. However, additional research will be required before a final determination on eligibility can be made. That stated it is the opinion of the NYSHPO that the scope of work proposed in this undertaking will have *No Effect* on those resources listed in or potentially eligible for the registers.

If I can be of any further assistance I can be reached at john.bonafide@parks.ny.gov or (518) 268-2166.

Sincerely,

John A. Bonafide
Director,
Technical Preservation Services Bureau

via e-mail only

Division for Historic Preservation

P.O. Box 189, Waterford, New York 12188-0189 • (518) 237-8643 • www.nysparks.com



DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

March 29, 2016

REPLY TO
ATTENTION OF

Programs and Project Management Division

Carrie Meek Gallagher, Regional Director
New York Department of Environmental Conservation
Region 1 Office
SUNY @ Stony Brook
50 Circle Road
Stony Brook, New York 11790-3409

Dear Ms. Gallagher:

We are planning to conduct a remedial investigation (RI) at the former Camp Hero, a formerly used defense site (FUDS), which is located on the eastern tip of the south fork of Long Island, New York (NY), approximately 5 miles east of the Village of Montauk. The former Camp Hero, now known as Camp Hero State Park, was established in early 1942 as a Coastal Defense Installation; the facility changed ownership within the military multiple times over the course of the following decades. Between 1974 and 1984, site lands were transferred to State, Local, and other Federal agencies, and the facility was permanently closed in 1982. Camp Hero State Park is operated by the New York State Office of Parks, Recreation and Historic Preservation.

The purpose of our two-phased investigation is to assess if former Department of Defense (DoD) activities at Camp Hero may have resulted in adverse environmental conditions. Forty-four Areas of Concern (AOCs) have been identified. These sites included former waste disposal and coal storage areas, abandoned drum locations, and former storage tanks. The AOCs are shown on Figure 1.

The RI technical approach will consist of two phases of field sampling investigation (Phase 1 and Phase 2). The primary objective of the Phase 1 investigation is to determine the presence or absence of contamination at the Camp Hero AOCs. The primary objective of the Phase 2 investigation is to determine the nature and extent of target constituents in soil, groundwater, surface water, and sediment at the Camp Hero AOCs and determine if there are unacceptable risks to human health and ecological health associated with exposure to related constituents. Proposed sampling activities at each AOC during Phase 1 are summarized in the attached table.

At most sites GeoProbe borings will be conducted to collect soil and groundwater samples. Care will be taken to minimize disturbance of vegetation to access the AOCs. Cutting of large trees (> 3" dbh) and snags will be avoided. We are coordinating the work with the New York Natural Heritage Program and will avoid impacts to any known rare plant populations. Impacts

to Eastern box turtle will be avoided by sweeping areas in advance of the track mounted GeoProbe for turtles. Some sampling will occur inside abandoned buildings. Sampling activities will be suspended and the Long Island Field Office and New York Department of Environmental Conservation contacted if any bats are encountered in the buildings. Phase I field work is expected to begin in April and be completed by June, 2016.

Please submit a letter with any concerns you have regarding the potential impacts of field sampling activities on listed species pursuant to the New York State Endangered Species Act.

If any additional information is required please contact me at (917) 790-8235 or Mr. Michael Penko of the New England District Environmental Resources Section at (978) 318-8139.

Sincerely,



Gregory J. Goepfert
Project Manager

Enclosure

Cc:

Steve Papa, USFWS Long Island Field Office
Julie Lundgren, NYNHP
John Swartout, NY DEC
Thomas Dess, Superintendent, Montauk State Park
Megan Cullen, New England District
M. Penko, New England District
Megan Donahue, AECOM

From: [Jennings, Kevin A \(DEC\)](#)
To: [Penko, John M \(Michael\) NAE](#)
Subject: [EXTERNAL] RE: Camp Hero
Date: Monday, May 09, 2016 3:01:26 PM

Mike,

We have no threatened or endangered species concerns for this project. The tree cutting limits would cover any concerns regarding northern long-eared bats if they were present and the turtle sweeps are always a good recommendation.

If they happen to find any bat guano in any of those bunkers it would be nice know about that.

Thanks

~Kevin

Kevin Jennings
Wildlife Biologist, Division of Fish and Wildlife
New York State Department of Environmental Conservation
50 Circle Rd, Stony Brook, NY 11790
P: 631-444-0307 | F: 631-444-0272 | kevin.jennings@dec.ny.gov

www.dec.ny.gov | |

-----Original Message-----

From: Penko, John M (Michael) NAE [<mailto:Michael.Penko@usace.army.mil>]
Sent: Monday, May 09, 2016 11:08 AM
To: Jennings, Kevin A (DEC)
Subject: Camp Hero

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Kevin:

Does the DEC have any comments on the attached letter? Field work is expected to start next week.

Thanks

Mike

Michael Penko
Ecologist
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742
978-318-8139

From: [Garofolo, Nicole \(PARKS\)](#)
To: [Glenn, Steven](#); [McGuinness, Brendan](#); [Lundgren, Julie \(PARKS\)](#)
Cc: [Martin, Amanda \(Arlington\)](#); [Donahue, Megan](#); [Cullen, Megan E NAE](#); [Penko, John M \(Michael\) NAE](#); [MacEwan, Mark](#)
Subject: [EXTERNAL] RE: Viburnum dentatum var. venosum at Camp Hero State Park
Date: Tuesday, May 24, 2016 2:21:46 PM

I agree with Julie's analysis. As long as efforts are taken to minimize impacts to the rare species, which it appears they will be, I have no problem with this plan proceeding. Thank you for including me in the loop.

Sincerely,

Nicole Garofolo

From: Glenn, Steven [<mailto:Steven.Glenn@aecom.com>]
Sent: Tuesday, May 24, 2016 7:17 AM
To: McGuinness, Brendan; Lundgren, Julie (PARKS); Garofolo, Nicole (PARKS)
Cc: Martin, Amanda (Arlington); Donahue, Megan; Cullen, Megan E NAE (Megan.E.Cullen@usace.army.mil); Penko, John M (Michael) NAE; MacEwan, Mark
Subject: RE: Viburnum dentatum var. venosum at Camp Hero State Park

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Brendan, yes, sounds like you are good to go pending confirmation from Nicole from NY Parks.

Yes, the seedlings also have stellate hairs and are easy to identify. I didn't encounter any *Viburnum dentatum* var. *lucidum* (the stellate hair free variety- syn. *Viburnum recognitum*).

Regarding *V. d. venosum* distribution- it's everywhere at Camp Hero- extremely common- we even encountered several shrubs overhanging the parking lot where we meet then first day.

In a couple of locations it was so prevalent that we were hard pressed to find any route through.

Julie, sorry, but I didn't take any photos of the seedlings.

If any more assistance or questions are required regarding Camp Hero, don't hesitate to contact me.

Cheers,

Steve

Steve Glenn

Environmental Field Botanist III

631-662-8443 (cell)

732-564-3961 (office)

30 Knightsbridge Road
Piscataway, New Jersey 08854, USA

From: McGuinness, Brendan
Sent: Monday, May 23, 2016 5:43 PM
To: Glenn, Steven
Cc: Martin, Amanda (Arlington); Donahue, Megan; Cullen, Megan E NAE (Megan.E.Cullen@usace.army.mil <<mailto:Megan.E.Cullen@usace.army.mil>>); Penko, John M (Michael) NAE; MacEwan, Mark
Subject: FW: Viburnum dentatum var. venosum at Camp Hero State Park

Hi Steve – Good work. I have included Megan Cullen and Mike Penko and our team on this most recent email chain. It appears we may be good to go without extra measures for protection of seedlings for drilling at Camp Hero?

Brendan McGuinness

AECOM Environment

D 703.682.1564

From: Young, Steve (DEC) [<mailto:steve.young@dec.ny.gov>]
Sent: Monday, May 23, 2016 4:55 PM
To: Lundgren, Julie (PARKS); McGuinness, Brendan; Glenn, Steven; Garofolo, Nicole (PARKS)

Cc: Ring, Richard M (DEC); CebadaMora, Gabriella (PARKS)
Subject: RE: Viburnum dentatum var. venosum at Camp Hero State Park

Hi Julie and Steve,

I would expect that the seedlings would have the stellate hairs on the petioles like the larger shrubs but it would be nice to confirm.

Steve

From: Lundgren, Julie (PARKS)
Sent: Monday, May 23, 2016 4:51 PM
To: McGuinness, Brendan <Brendan.McGuinness@aecom.com <<mailto:Brendan.McGuinness@aecom.com>> >; Steven.Glenn@aecom.com <<mailto:Steven.Glenn@aecom.com>> >; Garofolo, Nicole (PARKS) <Nicole.Garofolo@parks.ny.gov <<mailto:Nicole.Garofolo@parks.ny.gov>> >
Cc: Young, Steve (DEC) <steve.young@dec.ny.gov <<mailto:steve.young@dec.ny.gov>> >; Ring, Richard M (DEC) <richard.ring@dec.ny.gov <<mailto:richard.ring@dec.ny.gov>> >; CebadaMora, Gabriella (PARKS) <Gabriella.CebadaMora@parks.ny.gov <<mailto:Gabriella.CebadaMora@parks.ny.gov>> >
Subject: Re: Viburnum dentatum var. venosum at Camp Hero State Park

Hi Steve

I have been kept in the loop with this project, so I can help you out. Nicole, the environmental analyst from OPRHP can send any additional thoughts or needs and confirm my recommendations.

This rare species has no federal status or regulations, and the DEC regs give OPRHP authority over the rare plants on its land; see page vi in the Rare Plant Status List
Blockedhttp://www.dec.ny.gov/docs/fish_marine_pdf/2010rareplantstatus.pdf

It is great you are taking the time to identify the rare Viburnum dentatum var. venosum (arrowwood) and avoid disturbing that plant as much as possible. I am not sure we could key out seedlings for certain either, but since the rare one is the dominant at this location, chances are these seedlings are the rare species. However, given the abundance of mature Viburnum d-v over a large area and the small scope of the disturbance you are creating (and mostly near structures as I recall), the loss of some seedlings for your project would have minimal impact on this population of Viburnum and would be acceptable. We appreciate the effort to date in taking measures to avoid impacts to the rare species and communities in the park.

If you have a chance to send me some geo-referenced photos of the Viburnum seedlings, I would be interested in having photos to add to our image database.

Julie A. Lundgren, State Parks Ecologist

NY Natural Heritage Program of SUNY College of Environmental Science and Forestry

in partnership with NYS Office of Parks, Recreation and Historic Preservation, Albany NY

julie.lundgren@parks.ny.gov <<mailto:julie.lundgren@parks.ny.gov>> or jalundgr@esf.edu
<<mailto:jalundgr@esf.edu>>

From: Glenn, Steven [<mailto:Steven.Glenn@aecom.com>]
Sent: Tuesday, May 17, 2016 11:29 PM
To: Young, Steve (DEC)
Cc: McGuinness, Brendan
Subject: *Viburnum dentatum* var. *venosum* at Camp Hero State Park

Hi Steve, AECOM has been working with the US Army Corp of Engineers at Camp Hero State Park this week, conducting preliminary surveys on potential remediation sites. One of the target species provided by the New York Heritage Program at Camp Hero is *Viburnum dentatum* var. *venosum* (NY-S2). We have found this species quite abundant on numerous sites in Camp Hero and it appears the population is stable and thriving.

Some of the survey sites require vegetation clearance and the insertion of heavy equipment. At those sites I have been flagging specimens of *V. d.* var. *venosum* for preservation and have been consulting with the USACE to provide the best method of egress for equipment that avoids these specimens. The problem is that a few sites also have numerous seedlings of *V. d.* var. *venosum* that are almost impossible to avoid without employing extraordinary measures.

I write to you asking for guidance as to the NYDEC's tolerance for the possible destruction of a few seedlings in order to complete the surveys.

Please feel free to email or phone me at your convenience, or provide me with a contact if another NYDEC authority is required.

Cheers,

Steve

Steve Glenn

Environmental Field Botanist III

631-662-8443 (cell)

732-564-3961 (office)

30 Knightsbridge Road
Piscataway, New Jersey 08854, USA

From: [Papa, Steve](#)
To: [Penko, John M \(Michael\) NAE](#)
Subject: [EXTERNAL] Re: Camp Hero
Date: Monday, May 09, 2016 12:47:39 PM

<http://www.fws.gov/Midwest/endangered/mammals/nleb/index.html>

Steven T. Papa
U.S. Fish and Wildlife Service
Long Island Field office
340 Smith Rd
Shirley, NY 11967
(631) 286-0485 (tel)
(631) 286-4003 (fax)
Steve_Papa@fws.gov <mailto:Steve_Papa@fws.gov>

"I only wish that besides protecting the songsters...we also protect the birds of the seashore..."
- T. Roosevelt

On Mon, May 9, 2016 at 12:46 PM, Papa, Steve <steve_papa@fws.gov <mailto:steve_papa@fws.gov> > wrote:

John,

See the attached for recommendation survey guidelines.

Steven T. Papa
U.S. Fish and Wildlife Service
Long Island Field office
340 Smith Rd
Shirley, NY 11967
(631) 286-0485 (tel)
(631) 286-4003 (fax)
Steve_Papa@fws.gov <mailto:Steve_Papa@fws.gov>

"I only wish that besides protecting the songsters...we also protect the birds of the seashore..."
- T. Roosevelt

On Mon, May 9, 2016 at 11:04 AM, Penko, John M (Michael) NAE <Michael.Penko@usace.army.mil <<mailto:Michael.Penko@usace.army.mil>> > wrote:

Steve,

Does the FWS have any comments on the attached letter.

Thanks

Mike

Michael Penko
Ecologist

US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742
978-318-8139

From: Penko, John M (Michael) NAE
To: ["julie.lundgren@parks.ny.gov"](mailto:julie.lundgren@parks.ny.gov)
Cc: ["McGuinness, Brendan"](#); [Cullen, Megan E NAE](#); ["Glenn, Steven"](#)
Subject: FW: Viburnum dentatum var. venosum at Camp Hero State Park
Date: Tuesday, May 24, 2016 1:15:00 PM
Attachments: [DSC_0289.JPG](#)

Julie,

Photograph of a seedling is attached (not my best work...). It was taken at the coal storage area. Brendan should be able to provide approx. lat/long.

Thanks for assisting with coordination.

Mike

Michael Penko
Ecologist
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742
978-318-8139

-----Original Message-----

From: McGuinness, Brendan [<mailto:Brendan.McGuinness@aecom.com>]
Sent: Monday, May 23, 2016 5:43 PM
To: Glenn, Steven <Steven.Glenn@aecom.com>
Cc: Martin, Amanda (Arlington) <Amanda.Martin@aecom.com>; Donahue, Megan <Megan.Donahue@aecom.com>; Cullen, Megan E NAE <Megan.E.Cullen@usace.army.mil>; Penko, John M (Michael) NAE <Michael.Penko@usace.army.mil>; MacEwan, Mark <Mark.MacEwan@aecom.com>
Subject: [EXTERNAL] FW: Viburnum dentatum var. venosum at Camp Hero State Park

Hi Steve – Good work. I have included Megan Cullen and Mike Penko and our team on this most recent email chain. It appears we may be good to go without extra measures for protection of seedlings for drilling at Camp Hero?

Brendan McGuinness

AECOM Environment

D 703.682.1564

From: Young, Steve (DEC) [<mailto:steve.young@dec.ny.gov>]
Sent: Monday, May 23, 2016 4:55 PM
To: Lundgren, Julie (PARKS); McGuinness, Brendan; Glenn, Steven; Garofolo, Nicole (PARKS)
Cc: Ring, Richard M (DEC); CebadaMora, Gabriella (PARKS)
Subject: RE: Viburnum dentatum var. venosum at Camp Hero State Park



NYSDEC SPILL REPORT FORM



DEC REGION: 1 SPILL NUMBER: 1602757
 SPILL NAME: CAMP HERO DEC LEAD: NJACAMPO
 SPILL DATE: 06/19/2016 SPILL TIME: 10:30 am
 CALL RECEIVED DATE: 06/19/2016 RECEIVED TIME: 11:34 am

SPILL LOCATION

PLACE: CAMP HERO COUNTY: Suffolk
 STREET: 1898 MONTAUK HIGHWAY TOWN/CITY: East Hampton
 COMMUNITY: CAMP HERO
 CONTACT: MEGAN CULLEN CONTACT PHONE: 781 799 0310

CONT. FACTOR: Unknown SPILL REPORTED BY: Federal Government
 FACILITY TYPE: Institutional, Educational, Gov., Other WATERBODY: _____

CALLER REMARKS:

Caller advised after installing a well found residual unknown product. Clean up is pending.

MATERIAL	CLASS	SPILLED	RECOVERED	RESOURCES AFFECTED
unknown material	Other		0 L	Soil,
unknown material	Other		0 L	GW,

POTENTIAL SPILLERS

COMPANY	ADDRESS	CONTACT
US ARMY COE	NY	

Tank No.	Tank Size	Material	Cause	Source	Test Method	Leak Rate	Gross Failure
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DEC REMARKS:

06/20/2016 @ 0815: Acampora left message for Ms. Megan Cullen, US ACoE to obtain additional details.

06/20/2016 @ 0823: Acampora had telecon with Ms. Cullen. Piezometer PZ-03 located near former Building 203 (Power House) indicates 4.5' of weathered petroleum (piezometer 1" diameter). Groundwater at 13.5' (product from 8' to 13.5'). She will submit an updated map indicating piezometer locations today.

PIN T & A COST CENTER

CLASS: B3 CLOSE DATE: _____ MEETS STANDARDS: False

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Attachment D

Army Geospatial Center Report

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CAMP HERO MONTAUK, NEW YORK



Historical Site Review (1940-1982) Formerly Used Defense Sites Program

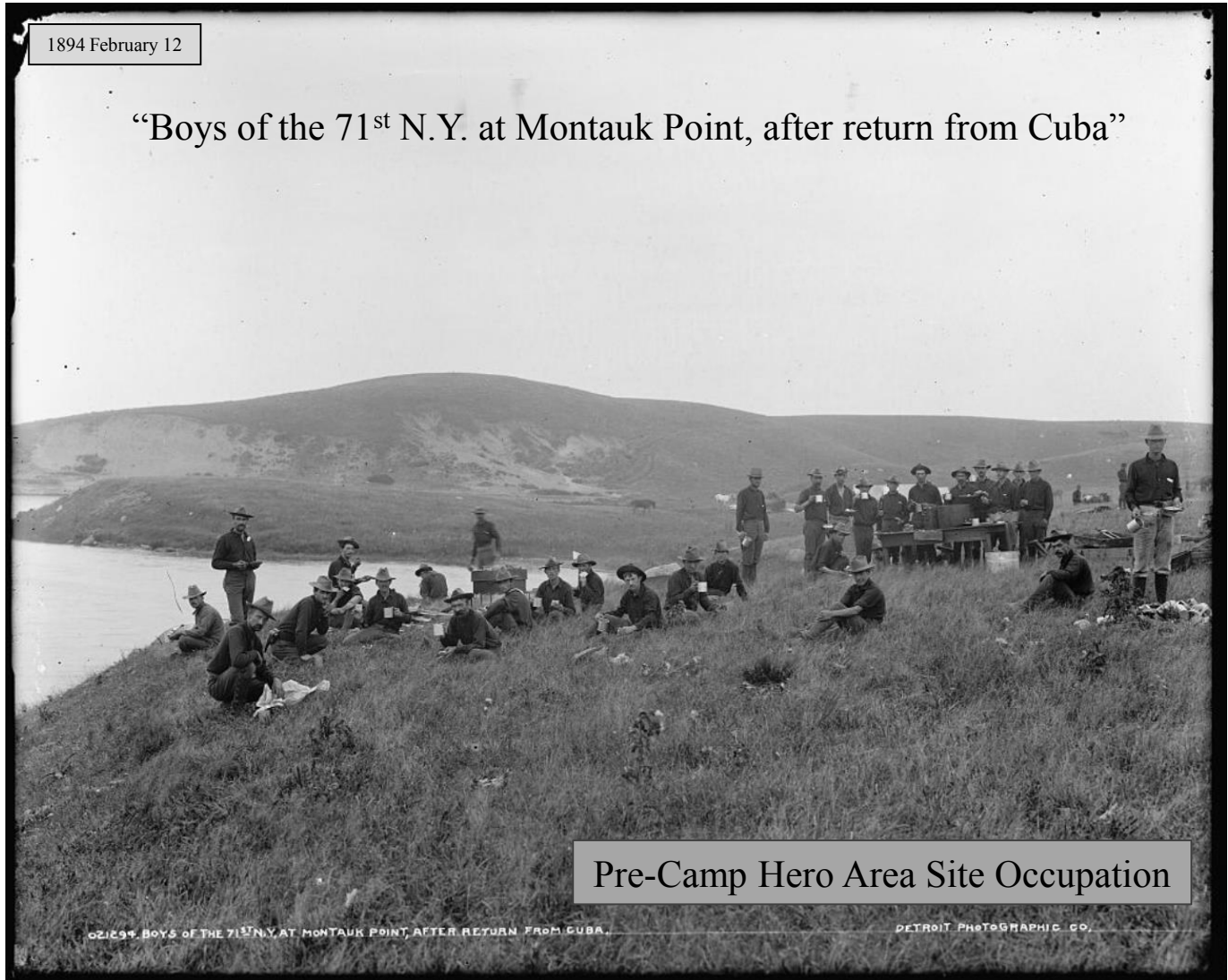


Photo Source: Library of Congress

March 2016

U.S. Army Corps of Engineers
 Army Geospatial Center
 Warfighter Support Directorate
 Hydrologic & Environmental Analysis Branch
 Environmental Analysis Team
 7701 Telegraph Road
 Alexandria, Virginia 22315-3864



Prepared for the U.S. Army Corps of Engineers,
 New York District, New York, New York



NOTICE and INTRODUCTION



NOTICE

The views, opinions, and conclusions in this report are those of the authors and should not be construed as official Department of Army positions or policy unless so designated by other documentation.

INTRODUCTION

The Hydrologic and Environmental Analysis Branch of the Warfighter Support Directorate was tasked to search, collect and quickly review historical aerial photography from 1940-1982 searching for features associated with dumps within the former Camp Hero boundary in Montauk Point, New York.

This report contains a summary of potential locations, along with a list of spatial data collected from 1940-1982.

This study was completed for the U.S. Army Corps of Engineers (USACE), New York District, New York, New York.



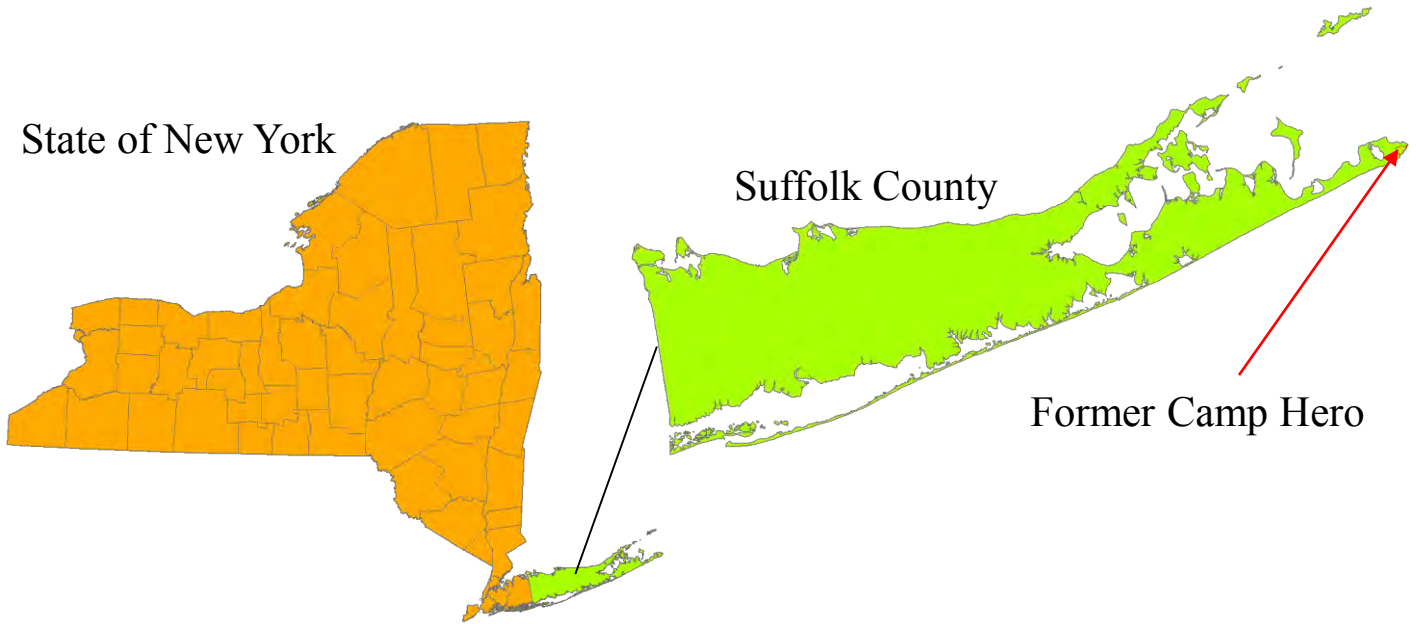
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PAGE 26	CONCLUSIONS, LIMITATIONS, & RECOMMENDATIONS
PAGE 27	SOURCES OF SPATIAL DATA
PAGE 28	SOURCES OF INFORMATION



PROJECT AREA LOCATION FORMER CAMP HERO, NEW YORK



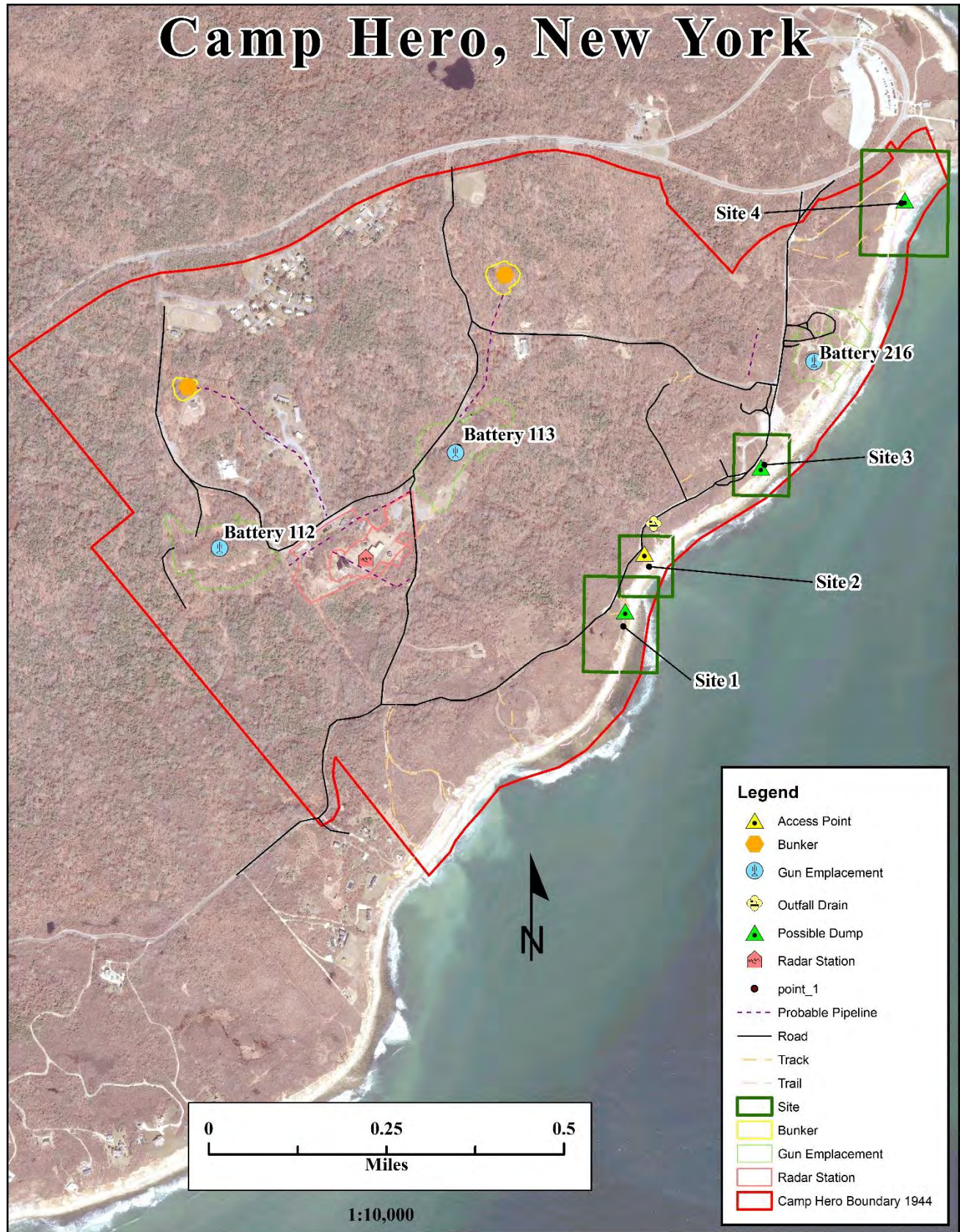
Area of Interest

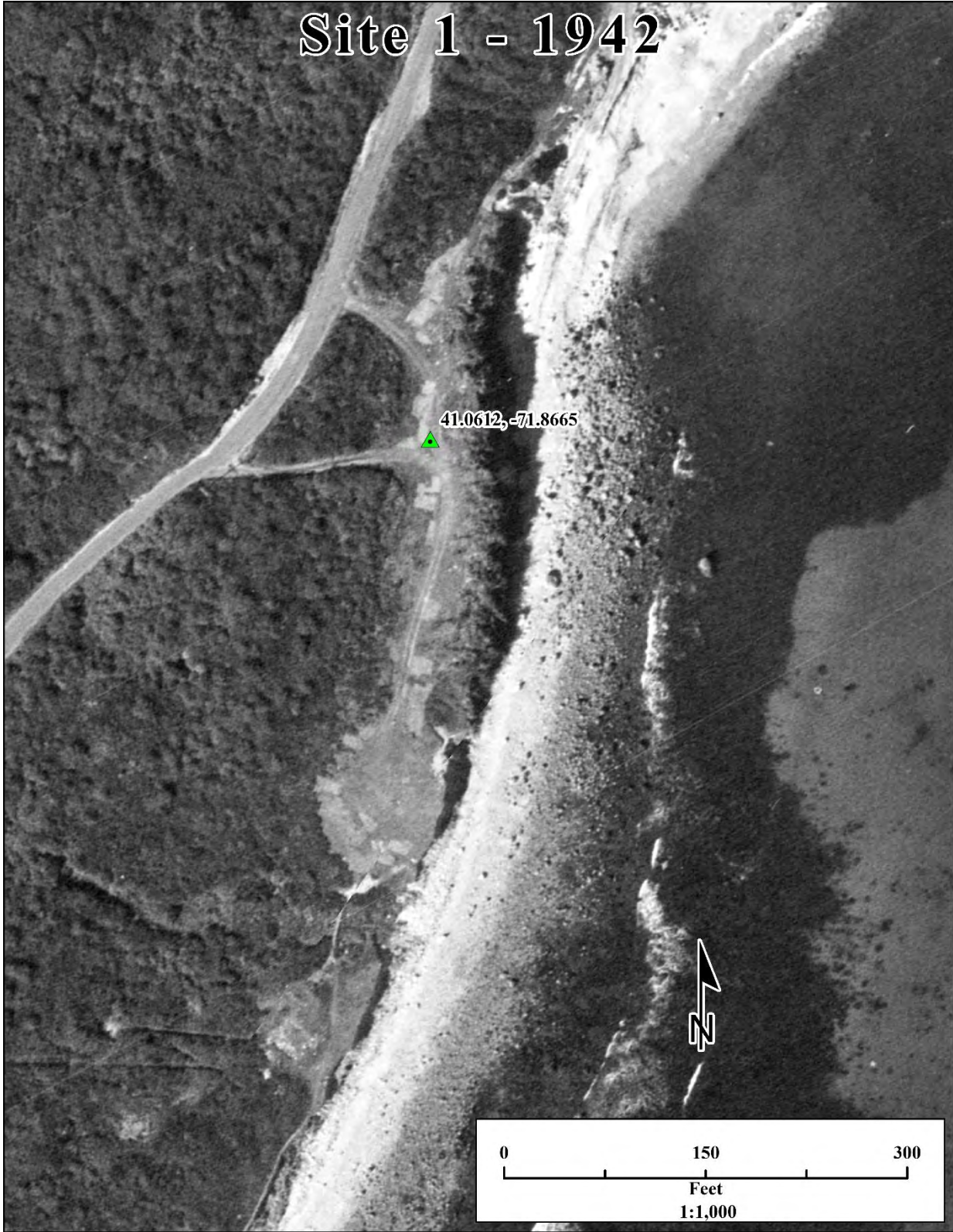


— = Former Camp Hero boundary lines



Site Locations 1940-1982





Access to a cleared area from main roadways indicates that this could be a possible dump location. Vehicle tracks are clearly visible and there is access to the bluff.



No aerial photographic evidence of waste piles or dumping is observed in 1951.



Possible erosion or slope failure is observed in 1962 in the area of possible dumping (noted by arrow). Vehicle tracks are observed in the beach area.



No evidence of waste piles or dumping is observed in the 2013 satellite image.



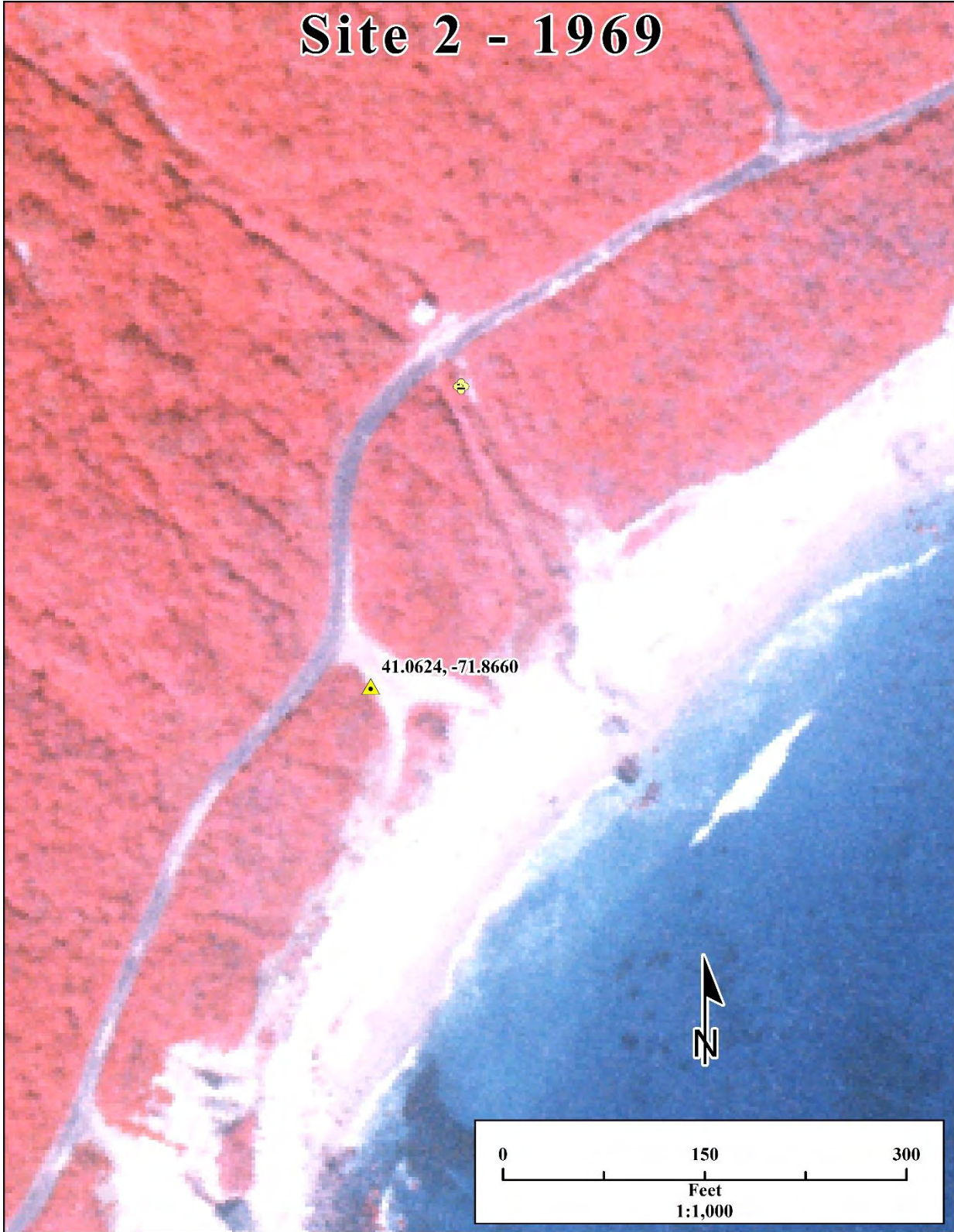
Access from the main roadway to a cleared area on the beach indicates that this could be a possible dump location. Vehicle tracks are clearly visible in this area.



Possible erosion and/or slope failure near the access point from the roadway is observed in the 1951 aerial photograph. It's possible that dumping could have occurred at this point, as there are vehicular tracks leading to and from this area. No clear, obvious evidence of waste piles or dumping is observed in 1951. Note: Low spatial resolution of this photograph does not allow for the identification of waste piles or dumping.



No aerial photographic evidence of waste piles or dumping is observed at Site 2 in 1962.



No significant activity is observed at the site in 1969. Note: In this color-infrared photograph, vegetation appears red in color. Also, low spatial resolution of this image does not allow for the identification of waste piles or dumping.



No aerial photographic evidence of waste piles or dumping is observed at Site 2 in 2013.



Site 3 is an area where possible dumping could have occurred; however, no dumping-related activity is observed in 1942. Note residential houses are observed in 1942, as well as open storage of drums at the top of the image.



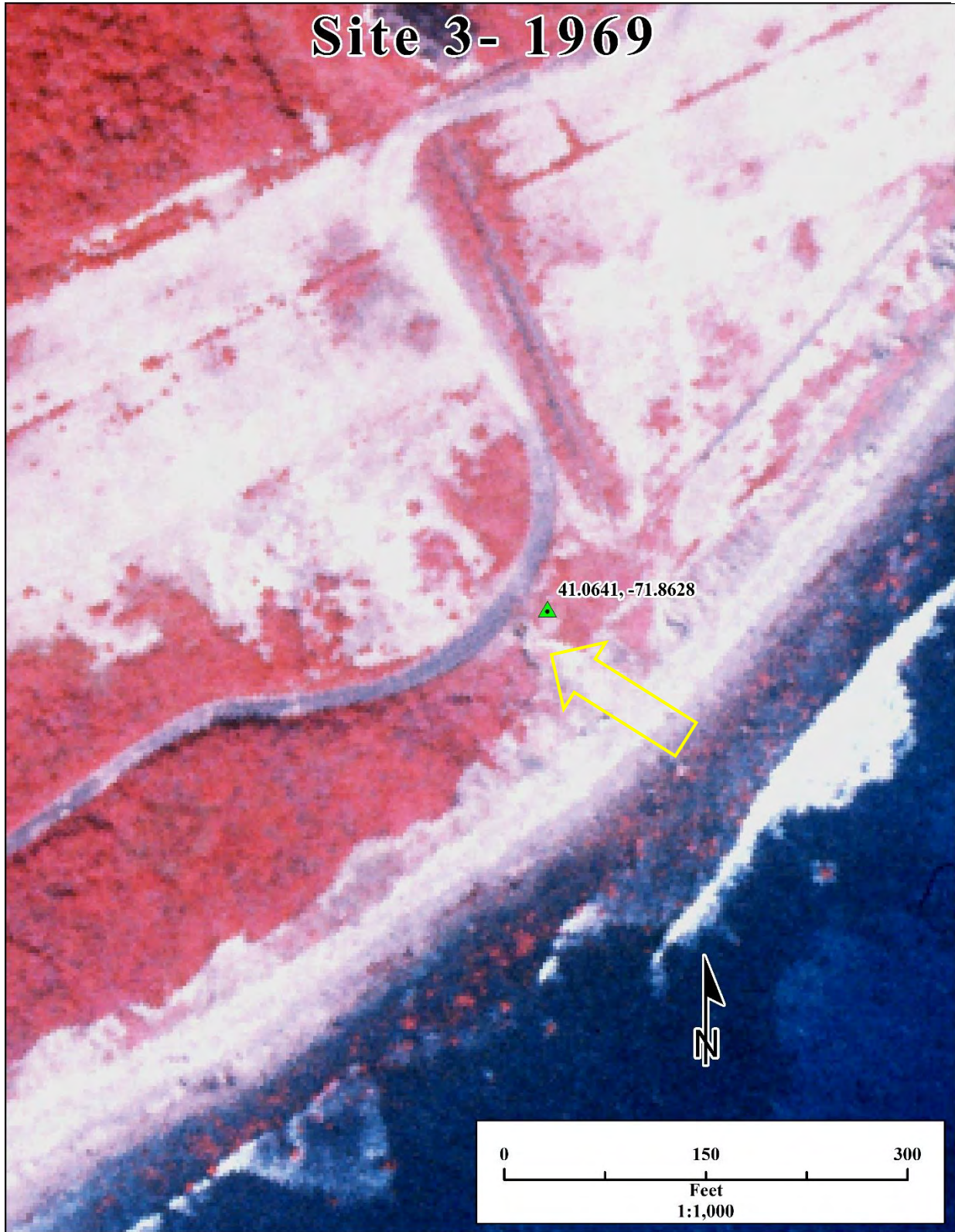
Major clearing of the property north of the possible dump site is observed. Heavy vehicle tracks are also observed in 1954 aerial photograph. Access to the bluff and beach are evident at this locations and dumping could have occurred during this clearing. The activity in this photograph is the same activity seen in the 1961 photograph on the next page. Material can be observed; however, coupled with the evidence seen from the finer resolution of the 1961 image, there is no direct evidence of dumping or waste piles observed in 1954. Note that houses from 1942 have been removed.



Continued activity, evidenced by vehicle tracks, is observed north of possible dump site. Possible debris, excess grading material, and/or accumulation of rock material due to slope failure is observed at the site.



Continued activity, evidenced by vehicle tracks, is observed north of possible dump site. Possible debris, excess grading material, and/or accumulation of rock material due to slope failure is observed at the site.



The lack of vegetation observed at the site could be indicative of continued erosion and possible slope failure identified by arrow. Note: In this color-infrared photograph, vegetation appears red in color.



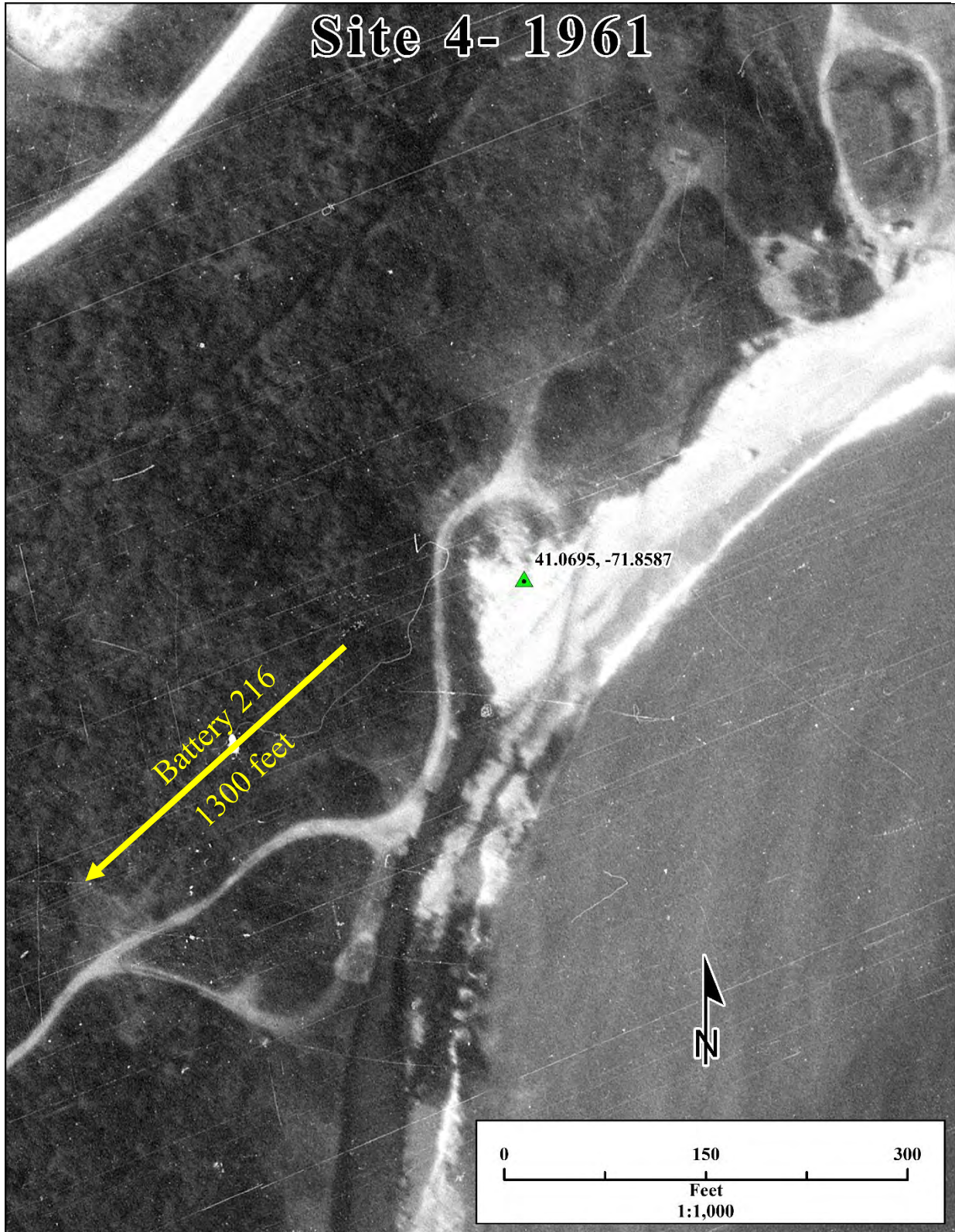
The formerly cleared areas north of Site 3 have been revegetated. No aerial photographic evidence of waste piles or dumping is observed at Site 3 in 2013.



Although no significant dumping or activity is observed at Site 4 in 1942, subsequent years indicate the site could have been an area used for dumping.



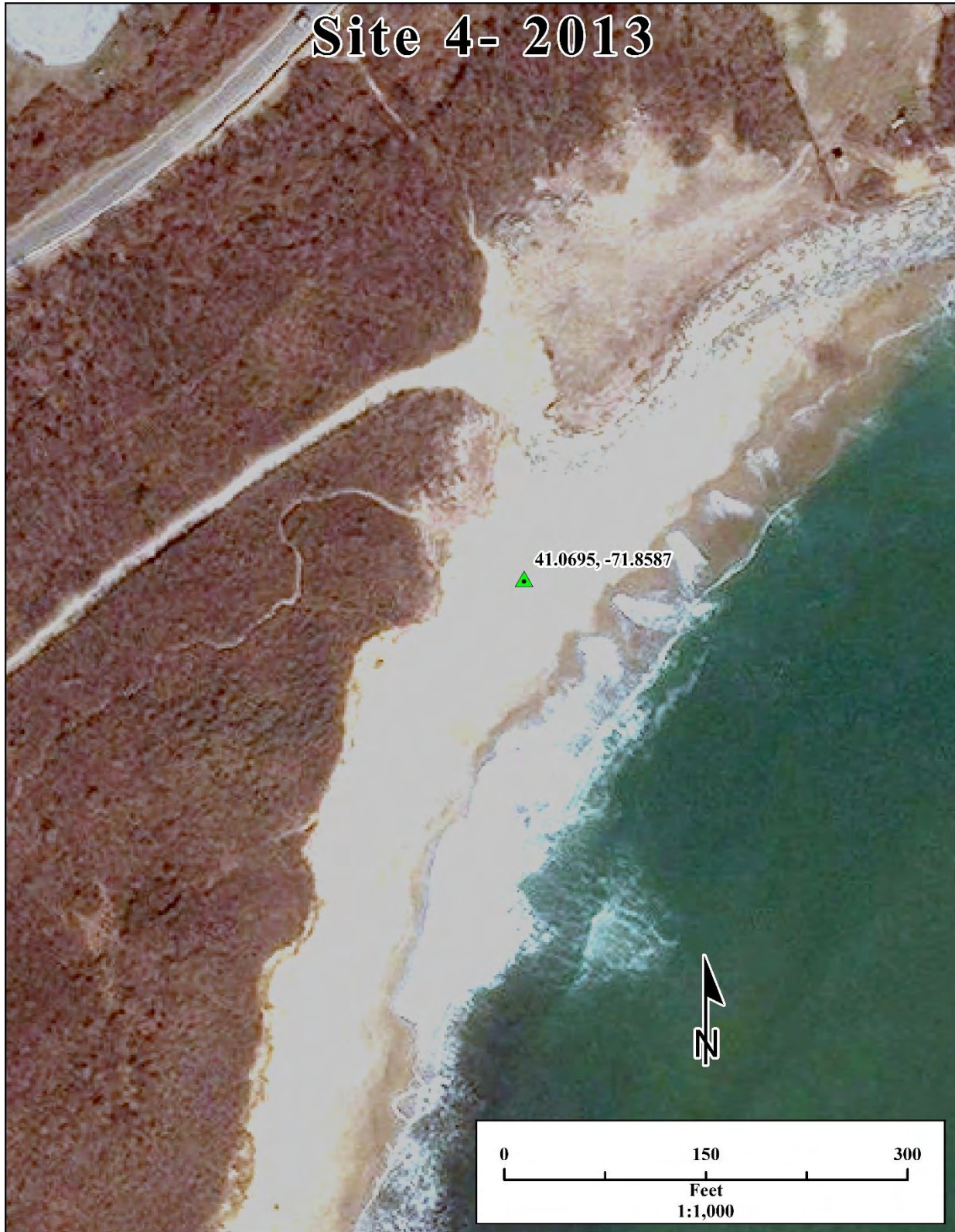
Tracks leading to and from the main roadway indicate the area was accessed in 1954.



In improved track leading from Battery 216 appears in the 1961 aerial photography. This area could have been a possible dump area north of Battery 216.



A small building appears 125 feet north of the possible dump site in the 1969 aerial photograph. There does not appear to be any direct evidence of dumping at the site (accumulated debris or piles of material). Note: In this color-infrared photograph, vegetation appears red in color.



Structures at Site 4 have been removed. No evidence of waste piles or dumping is observed at Site 4 in 2013.



CONCLUSIONS, LIMITATIONS & RECOMMENDATIONS



CONCLUSIONS

There was no photographic evidence of debris accumulation suggestive of a dump in the years collected within the timeframe of this project. There are four areas where dumping could have taken place (access points to cleared areas near or along the bluff during different years within the timeframe) and are identified within this report. Area 3 is the only site where significant material can be seen. This area could have been a potential landslide or contain piles of debris or material, given the activity adjacent to this area when the material can be seen, indicates possible dumping activity and should be further reviewed. There is significant activity observed around the location of Battery 216 (Site 4) during construction, but no features signifying long term dumping activity were identified per Conversation Record 1-2: James Schneidmuller, 1969-1993, “he knows of no landfill on the former camp, however there is evidence of an Army dumping station trash off the bluff by battery 216 into the ocean”. The proximity of the other areas (Areas 2-3 south and Area 4 north) around Battery 216 could be associated with James’ comments, but do not directly support the site association.

LIMITATIONS

The quality of photography collected during this project’s limited timeframe contains a mix of spatial resolutions; only one or two years possess a resolution quality high enough to visually identify smaller dumping activities. Additional years of photography are available and should be analyzed to rule out potential dumping activities. Analysis should also include finding and incorporating historical cartographic material and textual documents in order to verify or rule out any evidence of landfills or dumping. For example, the area identified are part of the AAA Firing Point area delineated on the Facility Layout Map (Archive Search Report, Plate 3). More research into the details of the activities of AAA Firing Point area could provide more insight into possible dumping, burial, or landfills along the southeastern coast of Former Camp Hero.

RECOMMENDATIONS

A full Historical Photographic Analysis, including a report and GIS package, is recommended. This process would include additional years of photography as well as a thorough analysis of the entire area. Irregularities within the existing photos reviewed indicate additional areas that should be reviewed further. In addition, the long history of the site area (to include the larger Camp Wikoff) limits some feature confirmation due to prior activity in the area, so including investigating activity at the site through research in the form of maps, available photography, and textual records is highly recommended.



SOURCES OF SPATIAL DATA

DATE	SOURCE	REMARKS
1942, 22 November	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1942, 22 November	NARA	PAN OBLIQUE AERIAL PHOTOGRAPHY
1944, 08 August	NOAA	PAN VERTICAL AERIAL PHOTOGRAPHY
1947, 27 September	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1951, 23 April	NOAA	PAN VERTICAL AERIAL PHOTOGRAPHY
1952, 11 February*	DIA	PAN VERTICAL AERIAL PHOTOGRAPHY
1954, 20 February	USGS	PAN VERTICAL AERIAL PHOTOGRAPHY
1956, 23 February*	DIA	PAN VERTICAL AERIAL PHOTOGRAPHY
1960, 19 October*	USDA	PAN VERTICAL AERIAL PHOTOGRAPHY
1961, 22 September	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1961, 22 September	NARA	PAN OBLIQUE AERIAL PHOTOGRAPHY
1962, 18 March	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1962, 25 March	NOAA	PAN VERTICAL AERIAL PHOTOGRAPH
1969, 16 September	USGS	CIR VERTICAL AERIAL PHOTOGRAPH
1971, 16 June	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1972, 12 July	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1972, 16 November	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1973, 10 August	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1973, 20 September	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1974, 27 April	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1979, 13 September	NARA	PAN VERTICAL AERIAL PHOTOGRAPHY
1980, 10 October	NOAA	MS VERTICAL AERIAL PHOTOGRAPH
2013, 22 March	NGA	MS SATELLITE ORTHOIMAGE
2016, 20 January	NGA	MS SATELLITE ORTHOIMAGE

DIA = Defense Intelligence Agency

NARA = National Archives & Records Administration

NGA = National Geospatial-Intelligence Agency

NOAA= National Oceanic and Atmospheric Administration

USGS = U.S. Geological Survey

PAN = panchromatic (black & white)

MS = multispectral (color)

CIR = color infrared (outside of visual spectrum, false color applied)

*Photography not received by AGC at the time of report completion.



SOURCES OF INFORMATION



National Archives and Records Administration (NARA) II
8601 Adelphi Road, College Park, MD

National Geospatial-Intelligence Agency
7500 GEOINT Drive, Springfield, VA

National Oceanic and Atmospheric Administration,
National Geodetic Survey Remote Sensing Division
1315 East-West Highway, Station 5150, Silver Spring, MD

U.S. Department of Agriculture, Farm Service Agency
Aerial Photography Field Office, 2222 West 2300 South, Salt Lake
City, UT

U.S. Geological Survey
Earth Explorer Web Portal (www.earthexplorer.usgs.gov/)

Attachment E

Geophysical Survey Report

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June 01st, 2016

Mark MacEwan, P.E.
Senior Program Director, AECOM
3101 Wilson Boulevard, Suite 900
Arlington, VA 22201
D 703.682.9092; mark.macewan@aecom.com.

Mr. MacEwan:

According to the Scope of Work (SOW) pertaining to supporting the overarching former Camp Hero Remedial Investigation (RI) Work Plan (WP) and other planning documents, AECOM intends to check the sites for indicators of residual utilities or unique subsurface features still in place. As part of the contract, subsurface soil samples and/or groundwater samples are required to be acquired near subsurface pollution source features (e.g., underground storage tanks [USTs], above ground storage tanks [ASTs], fuel pump houses [FPHs], waste dumps) without damaging or puncturing military installation infrastructure. Therefore, prior to the sampling activities, Digital Geophysical Mapping (DGM) surveys were planned as a proactive supplement to narrow down the search areas for specific installation infrastructure of interest for subsequent sampling activities. This process will supplement the local public utilities 1-call services as part of utility mark-outs as those only cover active utilities emplaced by the local government. As part of the DGM survey, the following areas were required for assessment of residual installation infrastructure features within the confines of pre-defined search areas at the Camp Hero facility:

- Tank A – Building 0020 – Fire Department, suspected former UST location(s)
- Tank B – Building 0022 – Kitchen/Office, suspected former UST location(s)
- Tank C – Building 0002 – Barracks, suspected former UST location(s)
- Tank D – Building 104R – Commissary, suspected former UST location(s)
- Tank E – Building 3001 – AT&T/Lilco, suspected former UST location(s)
- Tank F – Building FPH – suspected former UST location(s), hazardous materials
- Tank G – Building FPH – suspected former UST location(s),
- Tank 35 - Building FPH – large AST as part of the pump house(s)
- Vaults – Batteries 0216 – unknown use, potential storage or vaults
- Waste Area – Building 0113 – Plotting Room, potential storage or waste dump site

The intent of the geophysical surveys at each of the above sites is to: (a) verify the outline of a tank (if still exists), (b) identify the extent of residual subsurface features, and (c) examine the general vicinity to support the safe subsurface sampling within close proximity to key features.

1.0 FIELD SURVEY NOTES

The field survey methods consisted of a combination of electromagnetic (EM) Digital Geophysical Mapping (DGM) and magnetic (MAG) Analog Geophysical Mapping (AGM) metal detection surveys, at 5-ft increments, within the bounds of passable areas within the bounds of

each pre-marked survey area. The DGM was completed using the Geonics EM61-MK2 in relatively open areas while AGM, using a Schonstedt GA-72cd, was reserved for vegetated areas not maneuverable using DGM methods. After each set of sweeps and/or analyses, interpreted locations were relocated, marked, and annotated as to whether a surface feature coincides. As a footnote, the survey techniques will only verify the rough dimensions of a subsurface metal object, not necessarily verify the object is the tank unless inferences can be made because the expected location of the tank matches the outlined location of the tank. Regardless, the objects identified are large enough and should be avoided during sampling or any subsurface investigation activities. The field survey logbook notes in **Attachment A** catalogues file names, field procedures, and surface features pertinent to the process of interpretation of subsurface metal detection data. The expected locations of the tank(s) along with proposed sampling locations, as excerpted from the WP, are provided in **Attachment B** for reference. Lastly, a summary of field surveys with preliminary interpretations specific to each area are as follows. For reference to the text below, the final interpretation maps are provided in **Attachment C**.

1.1 Tank A – Building 0020

The findings are shown in **Figure 1** (i.e. a side-by-side representation of the full-sized map Figures B-1, C-1) and summarized by the following:

- Inferred utility junctions, documented culvert end-points, and confirmed fence-line / building infrastructures are identified on the geophysics map
- UST identified in the Figure B-1 could not be identified in C-1 due to the interference from the fence-line observed on surface, which implies the tank was removed as a tank-sized object was not detected elsewhere on survey data
- No unique features were identified which should require new sampling locations
- Utilities should be avoided during subsurface sampling activities

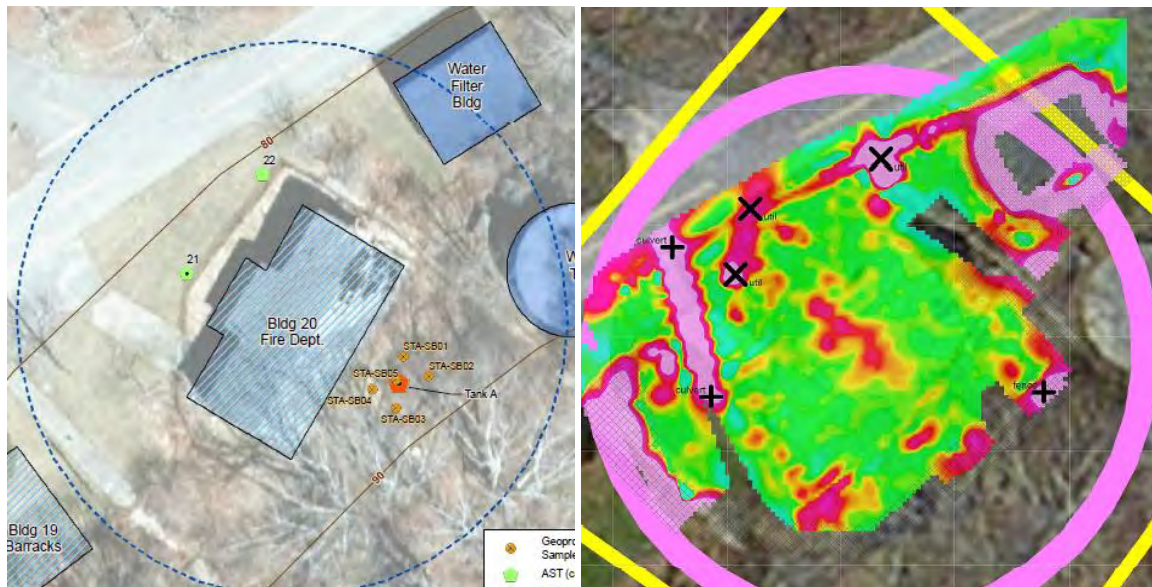


Figure 1. Side-by-Side Representation of Tank A – Building 0020

1.2 Tank B – Building 0022

The findings are shown in **Figure 2** (i.e. a side-by-side representation of the full-sized map Figures B-2, C-2) and summarized by the following:

- Inferred utility connections, documented manhole, speed-bump, and well, along with confirmed building infrastructure are identified on the geophysics map
- UST identified in the Figure B-2 appears to be identified in C-2, either in the form of a full-sized tank or the remnant infrastructure associated with the tank
- No unique features were identified which should require new sampling locations
- Utilities should be avoided during subsurface sampling activities

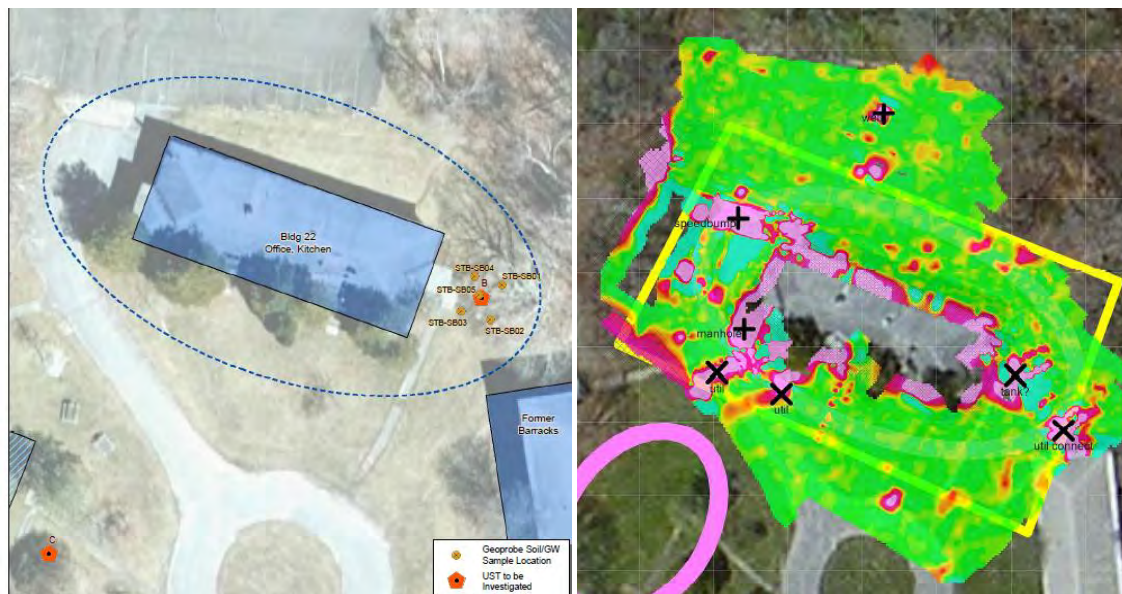


Figure 2. Side-by-Side Representation of Tank B – Building 0022

1.3 Tank C – Building 0002

The findings are shown in **Figure 3** (i.e. a side-by-side representation of the full-sized map Figures B-3, C-3) and summarized by the following:

- Inferred utility connections along with debris from former building infrastructure are identified on the geophysics map
- UST identified in the Figure B-3 appears to be identified in C-3, either in the form of a full-sized tank or the remnant infrastructure associated with the tank
- No unique features were identified which should require new sampling locations
- Former building infrastructure and utilities should be avoided during subsurface sampling activities as investigating these areas could damage equipment, along with potentially destroying infrastructure or harming personnel

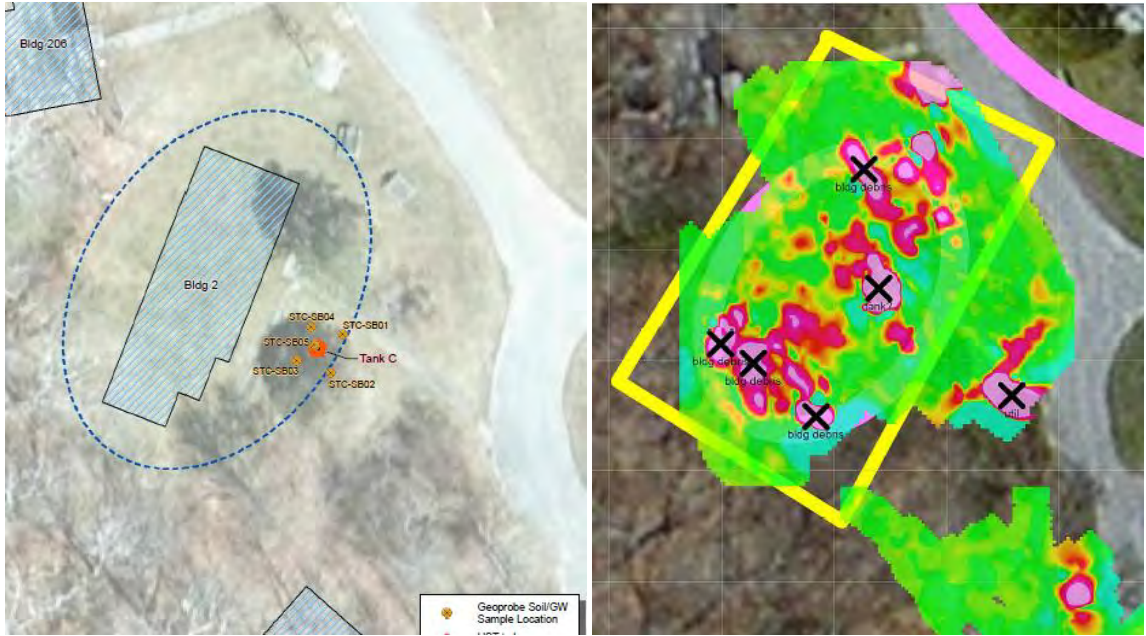


Figure 3. Side-by-Side Representation of Tank C – Building 0002

1.4 *Tank D – Building 104R*

The findings are shown in **Figure 4** (i.e. a side-by-side representation of the full-sized map Figures B-4, C-4) and summarized by the following:

- Inferred abundance of utility connections along with former building and concrete pad infrastructure are identified on the geophysics map
- UST identified in the Figure B-4 could not be identified in C-4, which implies the tank was removed and the tank was not detected elsewhere on survey data
- No unique features were identified which should require new sampling locations
- Former building infrastructure and utilities should be avoided during subsurface sampling activities as investigating these areas could damage equipment, along with potentially destroying infrastructure or harming personnel

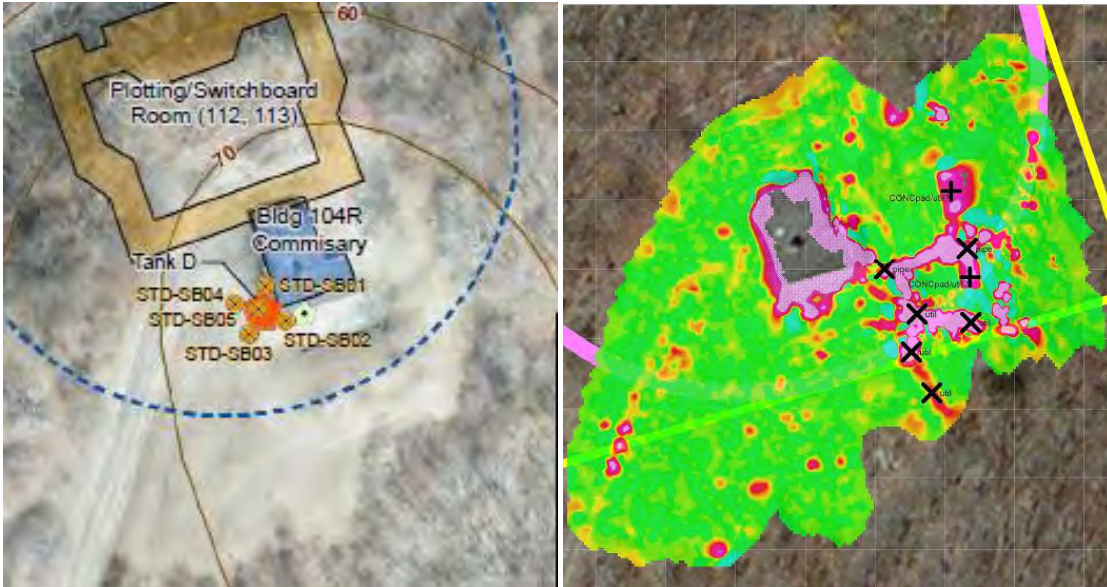


Figure 4. Side-by-Side Representation of Tank D – Building 104R

1.5 Tank E – Building 3001

The findings are shown in **Figure 5** (i.e. a side-by-side representation of the full-sized map Figures B-5, C-5) and summarized by the following:

- Confirmed building and fence-line interference, along with verified manholes and telephone pole surface features are identified on the geophysics map
- UST identified in the Figure B-5 could not be identified in C-5 due to the interference from the building, cars, and other metal debris observed on surface
- No unique features were identified which should require new sampling locations
- Current utilities should be avoided if subsurface sampling activities are conducted



Figure 5. Side-by-Side Representation of Tank E – Building 3001

1.6 Tank F and Tank G – Pump Houses

The findings are shown in **Figure 6** (i.e. a side-by-side representation of the full-sized map Figures B-6, B-7, C-6) and summarized by the following:

- Due to dense vegetation and terrain, these areas were assessed using AGM and no interferences (e.g., buildings, fences) are identified on the geophysics map
- USTs identified in the Figure B-6/B-7 could not be identified in C-6 due to the fact that a metallic item large enough to represent a UST could not be found and, as such, the USTs are implied to not reside within the bounded areas
- No unique features were identified which should require new sampling locations
- Current features should be avoided if subsurface sampling activities are conducted

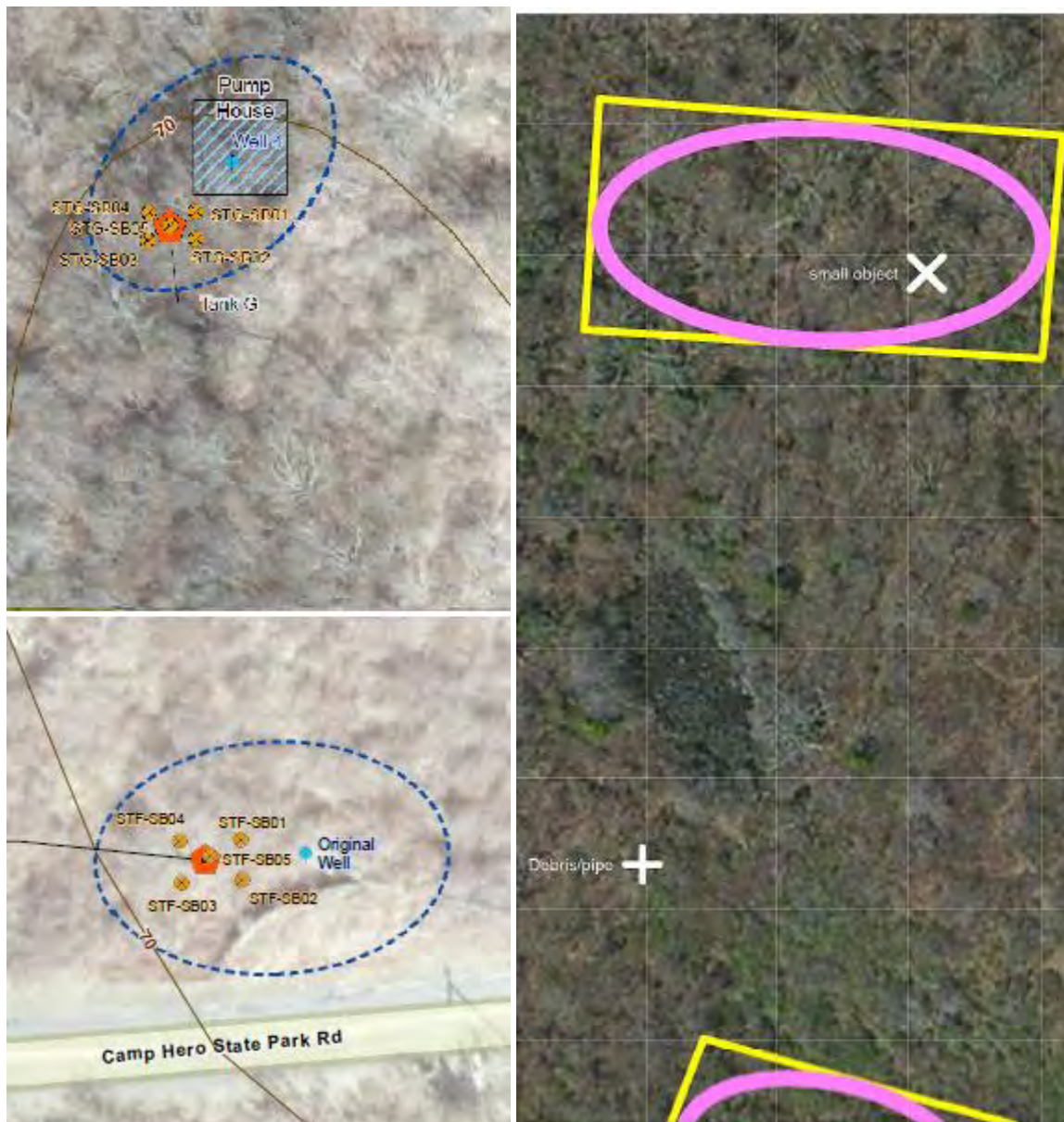


Figure 6. Side-by-Side Representation of Tank F and Tank G – Pump Houses

1.7 Tank 35 – Fuel Pump House

The findings are shown in **Figure 7** (i.e. a side-by-side representation of the full-sized map Figures B-8 and C-7) and summarized by the following:

- Confirmed building and fence-line interference, along with fuel piping and fuel pipeline surface features are identified on the geophysics map
- ASTs identified in the Figure B-8 could not be identified in C-7 due to the fact that a structure was an above ground tank and formerly located in a reinforced (with metal rebar) building
- Area west of the building with lots of subsurface anomalies, likely associated with the former fuel pump house infrastructure, should be avoided
- No unique features were identified which should require new sampling locations
- Current features should be avoided if subsurface sampling activities are conducted



Figure 7. Side-by-Side Representation of Tank 35 – Fuel Pump House

1.8 Storage or Vaults – Battery 216

The findings are shown in **Figure 8** (i.e. a side-by-side representation of the full-sized map Figures B-9 and C-8) and summarized by the following:

- Confirmed infrastructure interference, as identified on the geophysics map
- USTs identified in the Figure B-9 could not be identified in C-8, likely due to the fact the structures are closed and no longer residing as indicated in DGM data
- Not very many responses of significant size to be considered vaults or storage facilities, mostly debris or infrastructure identified
- No unique features were identified which should require new sampling locations
- Current features should be avoided if subsurface sampling activities are conducted

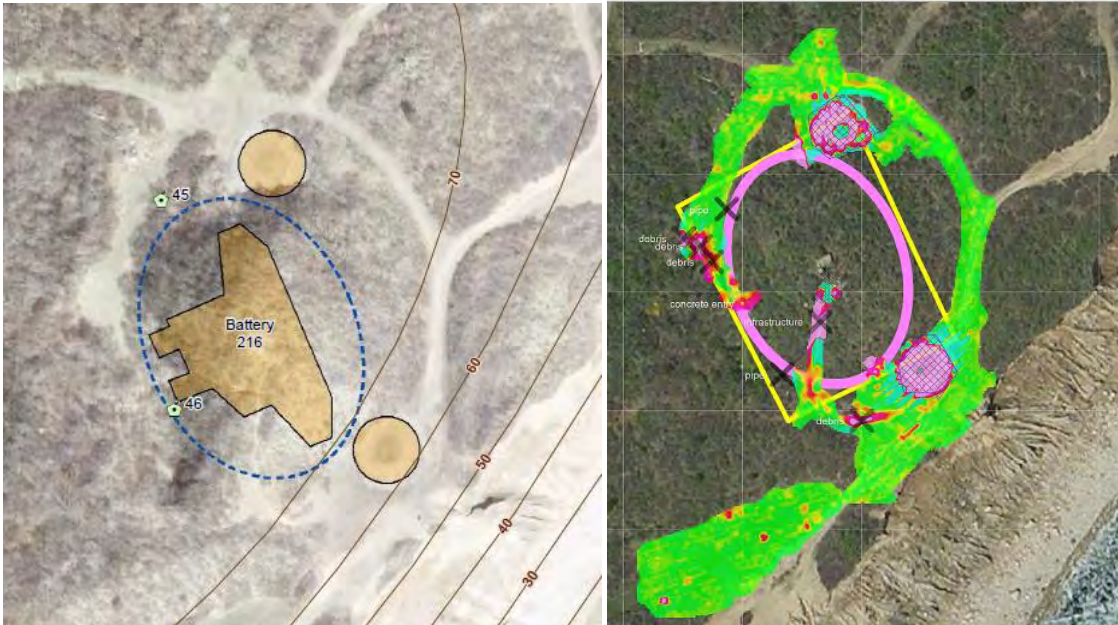


Figure 8. Side-by-Side Representation of Storage or Vaults – Battery 216

1.9 Waste Area – Building 0113

The findings are shown in **Figure 9** (i.e. a side-by-side representation of the full-sized map Figures B-10 and C-9) and summarized by the following:

- Two objects and corners of waste area, as identified on the geophysics map
- UST identified in the Figure B-10 could not be identified in C-9, likely due to the fact the structures are closed and no longer residing as indicated in DGM data
- Only one area identified as waste area, remainder of site anomalies too isolated
- No unique features were identified which should require new sampling locations
- Current features should be avoided if subsurface sampling activities are conducted

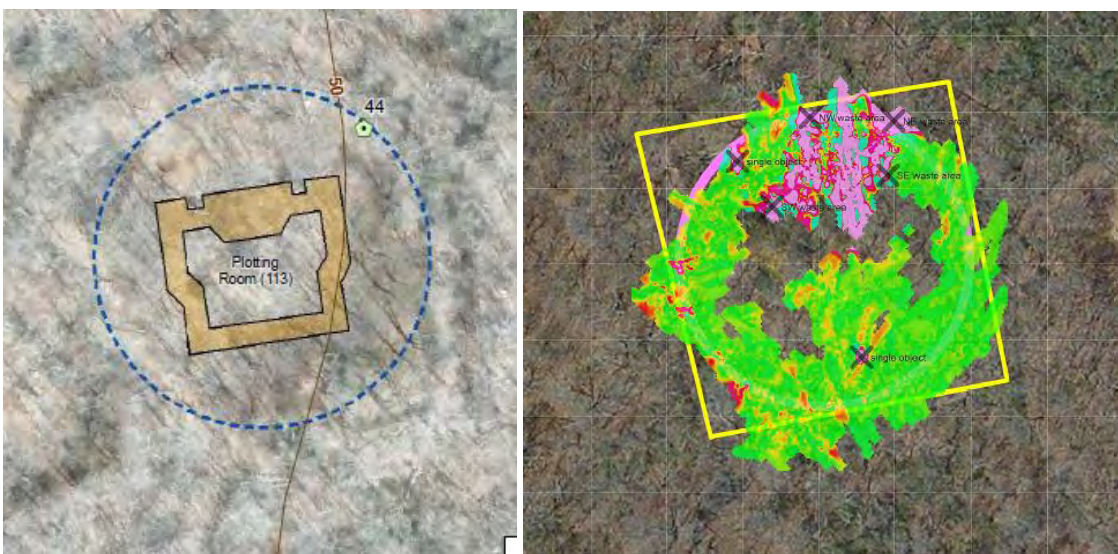


Figure 9. Side-by-Side Representation of Waste Area – Building 113

2.0 APPLICATION SUMMARY OF SURVEY RESULTS

After introducing the side-by-side maps in the previous section, the following is an over-arching summary for the application of the geophysical survey results during sampling activities:

1. Avoid investigating over top of any areas marked-out as infrastructure related (e.g., utilities, buildings, debris) or fuel related (e.g., pipelines, USTs, ASTs);
2. Tank A (Building 0020), Tank D (Building 104R), Tank E (Building 3001), Tank F, Tank G, and Storage Vault (Battery 216) areas *may consider avoiding sampling* as no indications of USTs or other fuel storage within the areas assessed by geophysics;
3. Tank 35 (Building FPH) areas *should consider modifying sampling* as no direct indications of USTs or other significant fuel storage facilities were clearly outlined, but currently standing infrastructure (e.g., building, fencing) and debris were identified to avoid, within the areas assessed by geophysics which overlapped areas expected to contain storage thus requiring careful avoidance;
4. Tank B (Building 0022), Tank C (Building 0002), and Waste Area (Building 113) *should consider maintaining similar sampling patterns* as indications of USTs, UST framework, waste area, and debris were identified within the areas assessed by geophysics which overlapped areas expected to contain these remnant features; and
5. As a footnote, portions of the Storage Vault (Battery 216) were avoided due to the special plant and vegetation species identified by the AECOM specialist.

The data review results are predicated on sampling in areas deemed necessary while circumventing drilling activities around objects identified within the geophysical survey maps. Anomaly avoidance procedures should be strictly adhered to during sampling activities.

3.0 CONCLUSIONS

In conclusion, areas have been recommended to be separated into three simple categories:

1. Discontinue further sampling due to lack of indications;
2. Modify sampling strategy due to desired sampling locations deemed areas to avoid; and
3. Maintain sampling strategy due to indications of expected remnant features.

If you have any questions or require additional information, please contact the undersigned at your convenience.



Brian S. Brunette, Professional Geophysicist (PGP) in CA & TX

Senior Technical Lead, Munitions Response Geophysics; AECOM

804.873.7517;

brian.brunette@aecom.com

ATTACHMENT A:
LOGBOOK ENTRIES FROM FIELD GEOPHYSICS TEAM

May 17, 2016

Camp Here

Weather: Partly Cloudy with a chance of rain in the late afternoon. High 65°F Low 48°

Crew: Eric Celebrezze (AECOM)
Matt Emmert (URS)

07:00 - Site Safety Brief / Meet with COR & Veg Crew.

07:30 - Setup base station and assemble EM-61.

08:00 - Starting to warm up EM-61 coils. Equipment shake-out.

08:50 - Setup latency test strip.

08:52 - Conducting a latency test.

File: 05171at

Battery: 12.30V

09:00 - Arrive at Bldg 22 for DGM survey.

09:15 - Starting survey

File: 0517BLD22

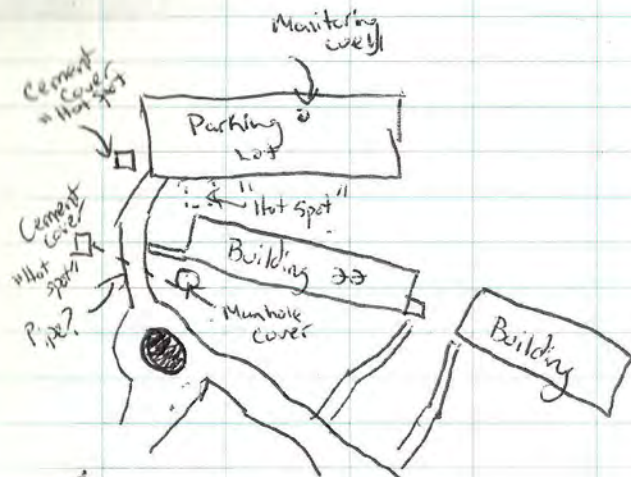
Battery: 12.30V

10:30 - Finished DGM survey. Three to four hotspots existed that we could audibly hear and at least 1 pipe run was heard while conducting the survey. See map/sketch

Hot in the Rain

May 17, 2016

Camp Here



* Note Not to scale

10:55 - Starting DGM survey of the area where building 2 on the map was located. Trees are in the area. Survey will be a bit choppy in coverage to avoid obstacles

File: 0517 B162

Battery: 12.15 Volts



* Note Not to Scale

May 17, 2016

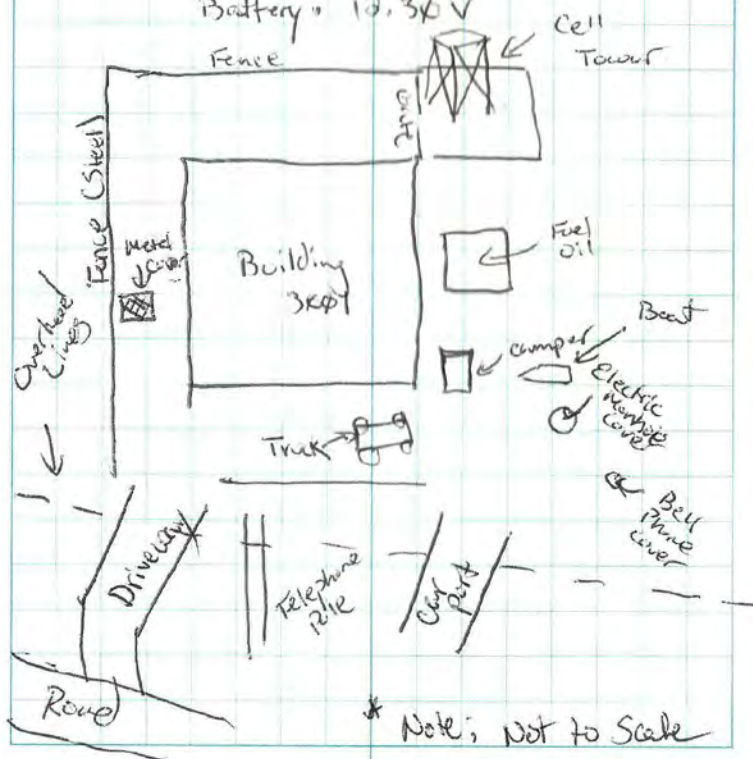
Camp Here

12:50 - Arrive at Bldg 3001 where there is a radio tower in the back corner. Switching the batteries in the EM-61. There is also pockets of cultural debris on the property. A steel fence surrounds the compound.

12:55 - Starting DGM survey.

File: 0517 COP

Battery: 12.36 V



* Note, Not to Scale

Rite in the Rain

May 17, 2016

Camp Hero

14:30 - At the fuel pump house to check out veg clearance. Talked to Nicole and suggested a few more clearance locations for optimum DEM survey results.

14:55 - At the base station conducting a pm latency test.

File: 05171atp

Battery: 12.30 volts

15:00 - Breaking down GPS base station and EM-61 equipment.

15:00 - Left site to process data

5/17/16
[Signature]
 END OF REPORT
 5/17/16

May 18, 2016

Camp Hero

Weather: Partly Cloudy with a 10% chance of rain. High of 61°F and a low of 47°F. Low UV index.

Crew: Eric Celebrezze (AECOM)

Matt Emmert (URS)

07:15 - Site Safety Meeting

08:00 - Started to setup GPS base station

08:25 - Warming up EM-61 for AM latency tests.

08:40 - Starting AM latency test

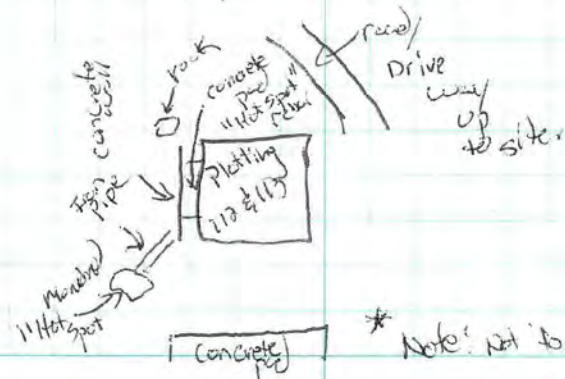
File: 05181atam

Battery: 12.45V

08:50 - At Plotter 112 & 113 for DEM survey.

File: 0518 Plot 112

Battery: 12.45 Volts



Plot in the Rain

May 18, 2016

Camp Hero

11:50 - Walked Plotting Room 113 to check for veg removed of site. Marked off areas that need to be removed more.

12:10 - Meet with Nicole to explain what veg removal team needs to do in order to conduct DGM survey.

13:15 - At the fuel pump house to begin DGM survey.

File: 0518Fuel

Battery: 12.50V



File: 0518Fuela

Battery: 12.50V

This file was created due to GIS turning off sometime during the DGM survey.

14:50 - At building site to fill in more DGM survey.

File: 0518Bld2

Battery: 12.30V

May 18, 2016

Camp Hero

16:04 - Starting closing (pm) latency test.

File: 0518latpm

Battery: 12.15V

16:06 - Starting breakdown of equipment.

16:30 - Leaving site to process/download data.

5/18/16
 END OF REPORT
 5/19/16
 [Signature]

May 19, 2016 Camp Here
 Weather: Cloudy with early AM rain.
 High of 61°F. Low of 47°F. Low
 UV index.

Crew: Eric Celebrezze (AECOM)
 Matt Emmert (URS)

- 07:00 - On site for site safety meeting.
- 07:30 - Setup the GPS base station and start
 EM-61 startup.
- 08:00 - Warming up coils for about 15 minutes
 for AM latency test.
- 08:15 - Morning latency test
 File: 0519 Latam
 Battery: 12.60V
- 08:25 - At Plotting 113 doing site walk before
 starting survey.
- 08:35 - Starting DGM survey
 File: 0519 Plot 113a
 Battery: 12.60V
- 10:10 - Finished first section of Plotting 113
 Called Brian about previous days data. Only
 Bldg 2 additional has been processed.
- 10:30 - Used GPS to determine the area
 provided to be DGM Plotting 113 is not correct.
 Plot 113 is now located using the centroid point.

May 19, 2016

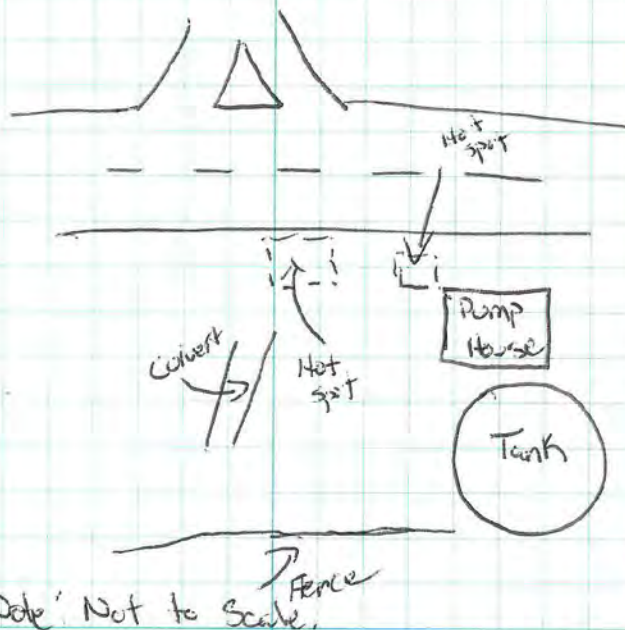
Camp Here

10:30 - Veg removal crew was called to
 come to area and remove veg around the
 Bunker of 113. Top of bunker will be
 mag/flag. for anomalies.

11:40 - At Fire house to conduct DEM
 survey to locate tanks.

File: 0519 Fire

Battery: 12.30V

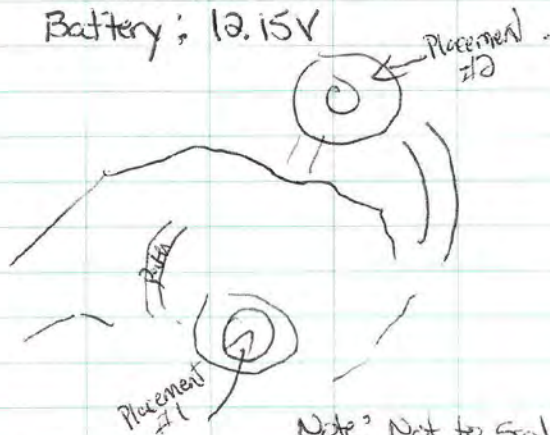


Rite in the Rain

May 19, 2016 Camp Hero
 13:00 At Battery 216 for DEM
 survey.

File: 0519 216

Battery: 12.15V



Note: Not to Scale

14:40 - Stopping DEM survey at Battery 216
 to meet Nicole at Plotting 213 AOC to
 check on veg clearance.

15:15 - Going to conduct a DEM survey on
 an outer and inner boundary of where the EM-61
 can collect data at Plotting Room 113.

File: 0519 Plot 113 Room

Battery: 12.00V

15:45 - Conducting PM latency test

File: 0519 latpm

Battery: 12.00V

May 19, 2016

Camp Hero

16:00 - Breaking down GPS base station
 and packaging up all equipment.
 16:30 - Heading out/off-site to download
 and preprocess today's data.

5/19/16
 END OF REPORT
 EWC
 5/19/16
 for [unclear]

May 27, 2016

Camp Hero

Weather: Cloudy with a High of 60°F and a low of 47°F. Low UV Index today. Turning to Mostly Sunny.

Crew: Eric Celebrezze (AECON)
Matt Emmert (URS)

- 07:00 - Site Safety Meeting
07:30 - Setting up GPS base station and assemble EM-61 MK2.
07:45 - started warming up EM-61 coils for morning latency test.
07:55 - Starting morning latency.

File: 0520Bat216a

Battery: 12.60V

08:00 - Heading to Plotting Room 113 to finish DEM survey in that area. Tree cover will be a concern for data collection and we will increase overlap and break into small pieces to achieve maximum coverage.

08:05 - Starting Plotting Room 113

File: 0520Plot113

Battery: 12.60V

11:15 - At Battery 216 to finish up DEM survey started yesterday

File: 0520Bat216

Battery: 12.60V

May 27, 2016

Camp Hero

12:00 - Finishing another front section of Battery 216.

File: 0520Bat216a

Battery: 12.45V

12:35 - All areas open to DEM survey have been collected at Battery 216.

12:45 - At the base station / latency test strip to close out DEM survey.

File: 0520latpm

Battery: 12.45V

13:00 - Started Analog geophysical survey of Battery 113.

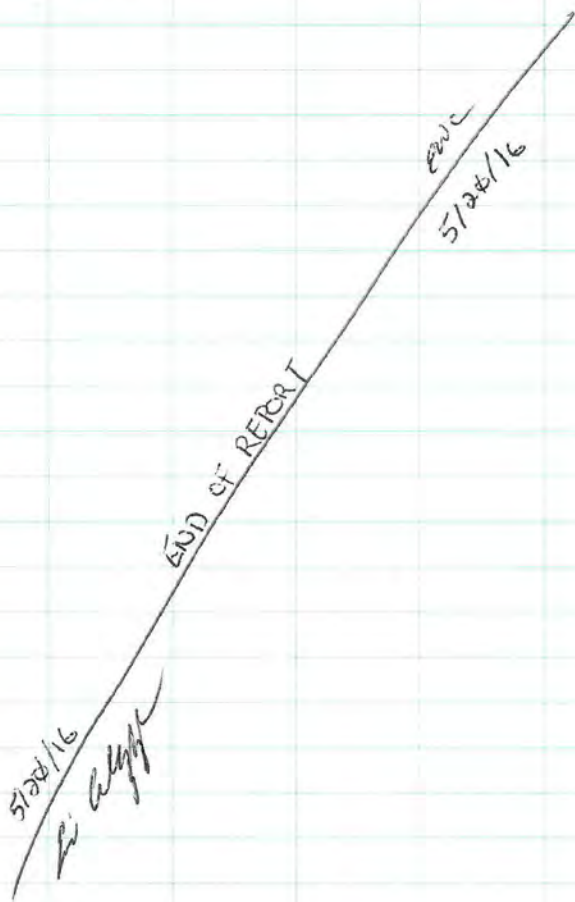


16:00 - started to break down gps base station.

May 22, 2016

Camp Hero

16:30 - Off-site to downtown and pre process data.



May 23, 2016

Camp Hero 17

Weather: High of 67°F and low of 51°F. Partly Sunny with a low UV index. 17% chance of Rain in the afternoon.

Crew: Eric Celebrezze (AECOM)

Matt Emmert (URS)

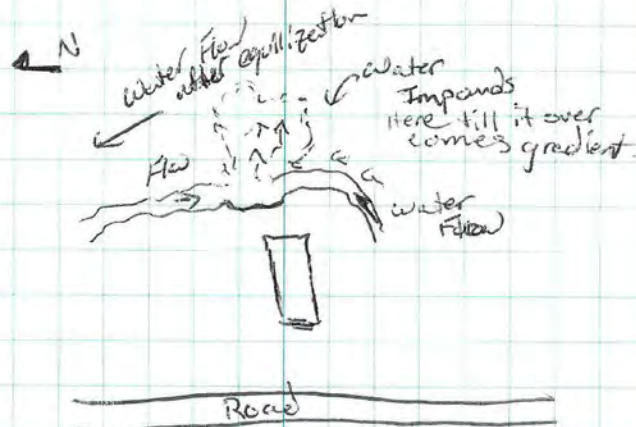
Nicole Schulman (URS)

07:00 - Morning Site Safety Meeting.

07:15 - setup GPS base station

07:30 - GPS is initialized and ready for relocations.

07:40 - went to GPS culvert/stream sediment however could not get a GPS lock in the stream to take an accurate measurement.



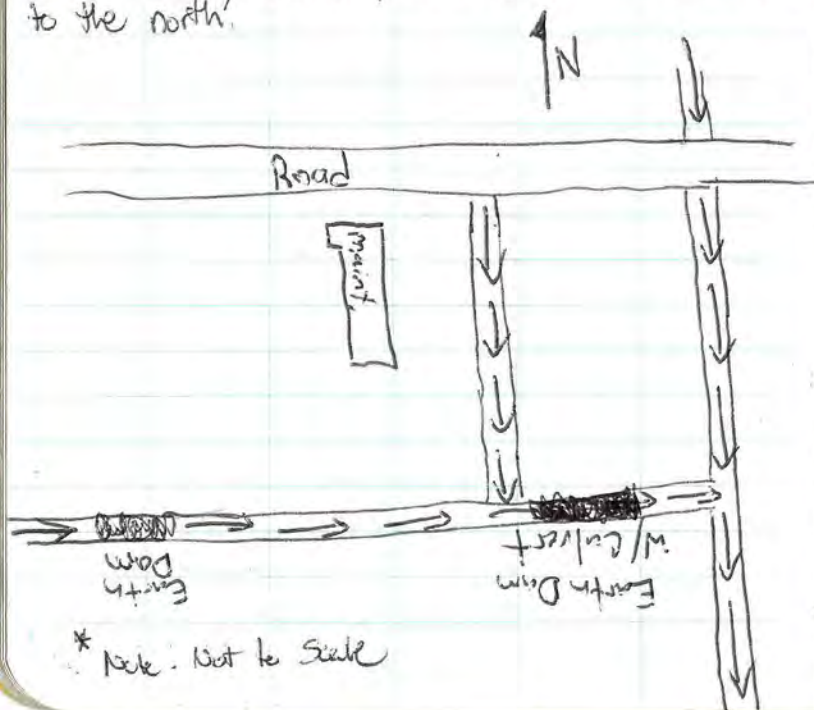
* Note: Not to scale

Rite in the Rain

May 23, 2016

Camp Hero

08:50 - The general flow of the stream is to the north ^{past} behind the maintenance building. However, directly behind the building is a slight elevation that heads to the south. Under storm conditions it is safe to assume the water impounds in between these two areas. A lack of plant life supports this assumption of water impoundment. It is also probable that once the gradient has been overcome by the impounded water flow resumes to the north.

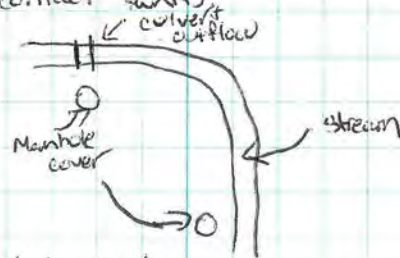


May 23, 2016

Camp Hero

09:50 - GPS Well near Battery 113. Found pipe coming out of the ground well concrete debris around it.

10:30 - GPS Two (?) wells near the chlorine contact tanks



* Note: Not to Scale.

12:00 - Start Analog Survey of Battery 216. Marked out 3 additional locations of possible tanks.

13:00 - Conducting survey of ACP4. Found a pipe and what used to be a manhole that has eroded away.

14:00 - Nicole Schulman off site.

15:00 - Removing V4 off list as it is concrete/rebar.

15:29 - B3 is Manhole cover Removing from list.

15:39 - E3 is Manhole cover Removing from list. E1 is telephone pole with wires. Removed.

Return to the River

May 23, 2016

Camp Hero.

16:37 - A6 was fence and removed from list

16:45 - Breaking down GPS base station and packing away equipment

GPS Points from survey

<u>ID</u>	<u>Northing</u>	<u>Easting</u>
Chlorine Well	334116.166	1572416.264
Chlorine Well-2	334417.019	1572437.312
Well @ Bank 113	334942.167	1573335.977
Pipe 1	333436.271	1570156.240
Pipe 2	333447.059	1570150.304
1700 - off-site		

5/23/16

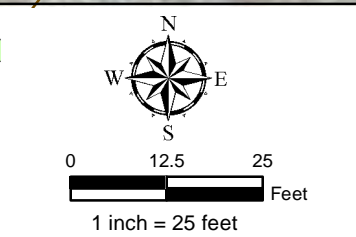
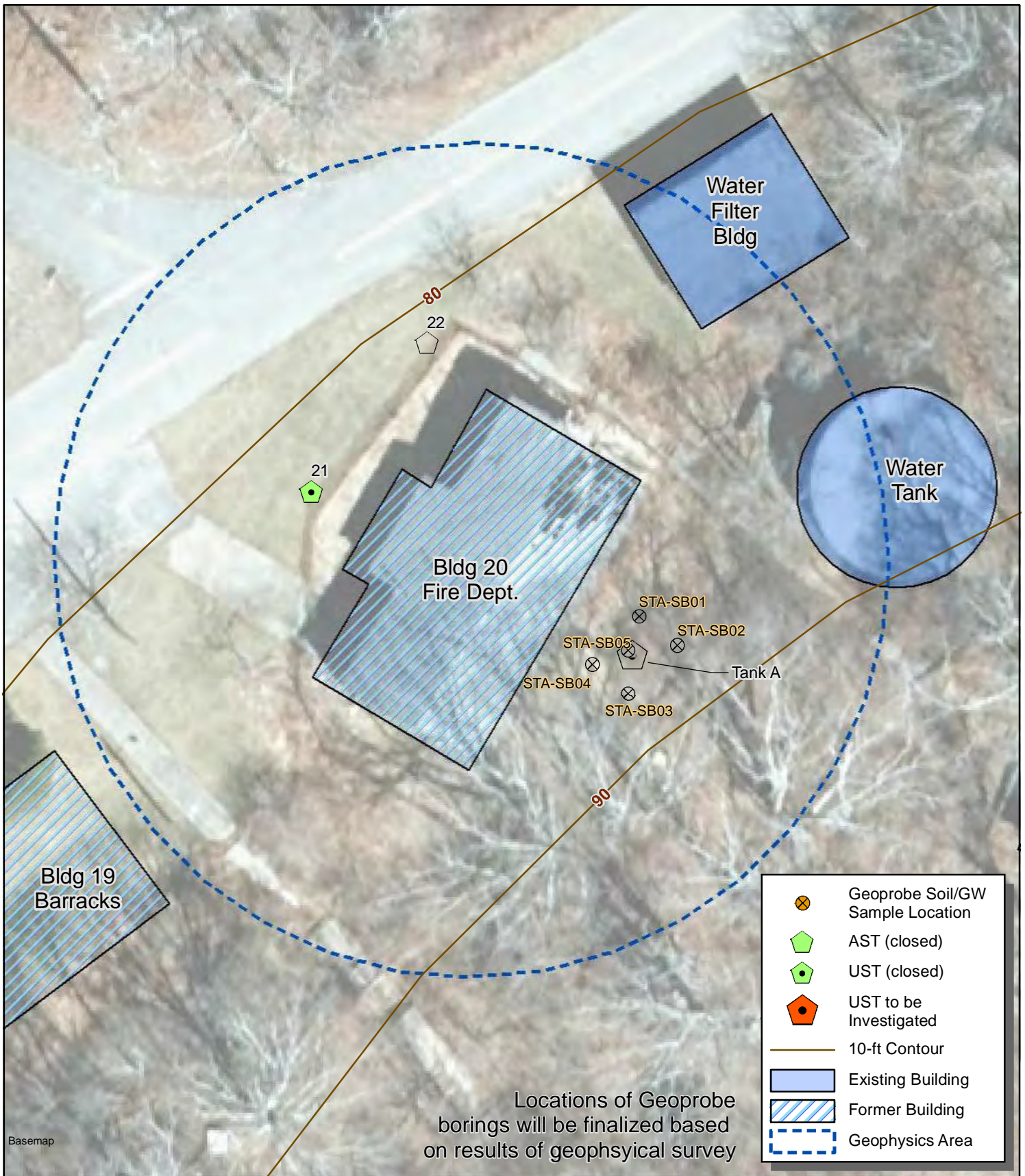
EWC

END OF REPORT

EWC
5/23/16

ATTACHMENT B:

**EXCERPTED WP MAPS SHOWING PLANNED SAMPLING LOCATIONS and
EXPECTED LOCATIONS OF INSTALLATION INFRASTRUCTURE**



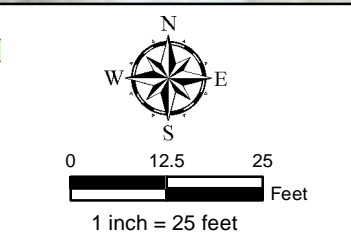
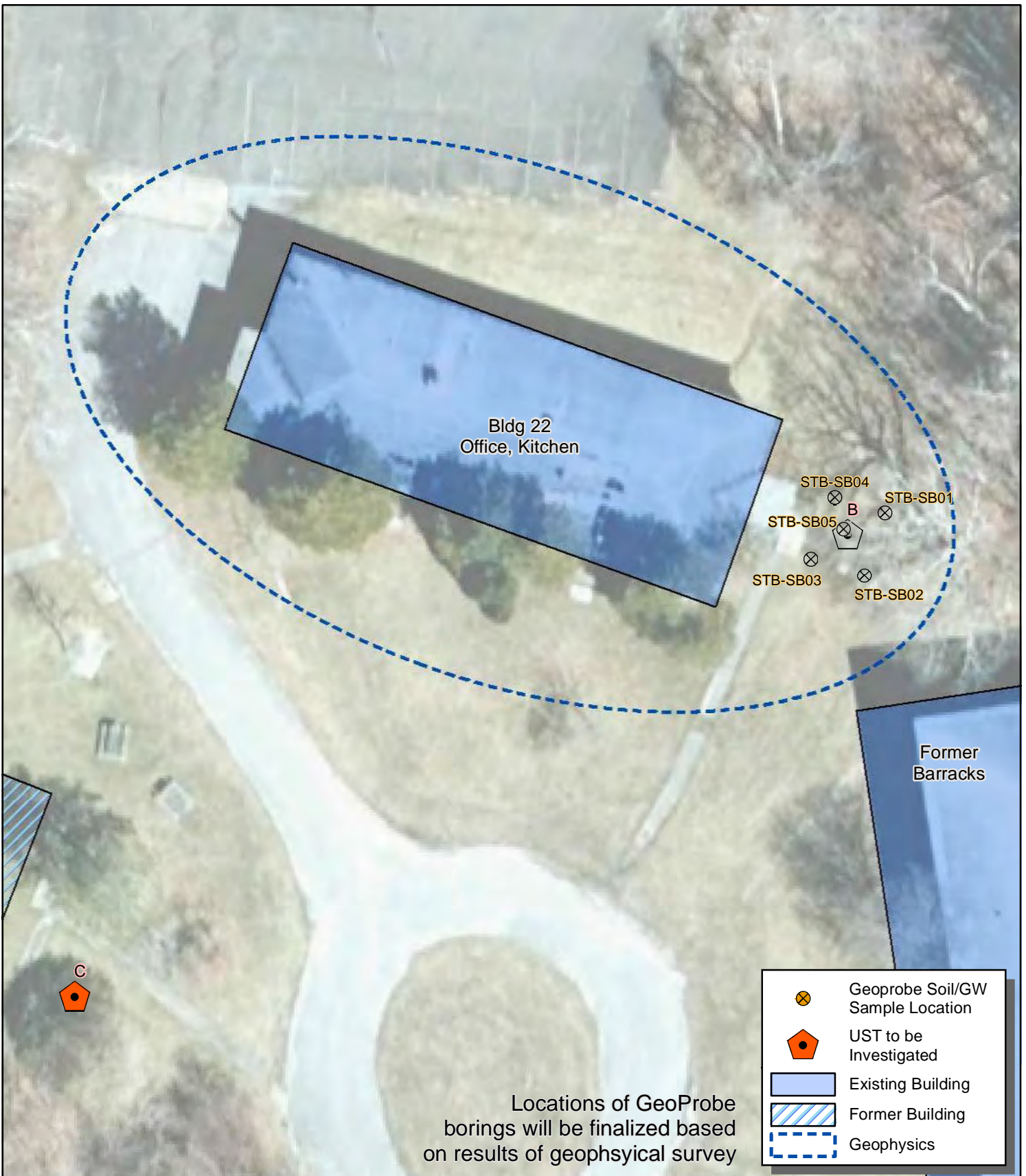
AECOM

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**Building 20 (Tank-A)
Phase 1 RI Sampling Locations**

Camp Hero Remedial Investigation Work Plan

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-7
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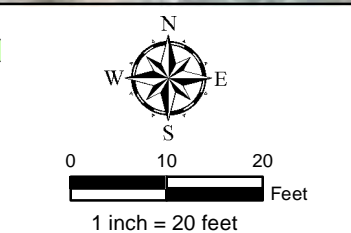
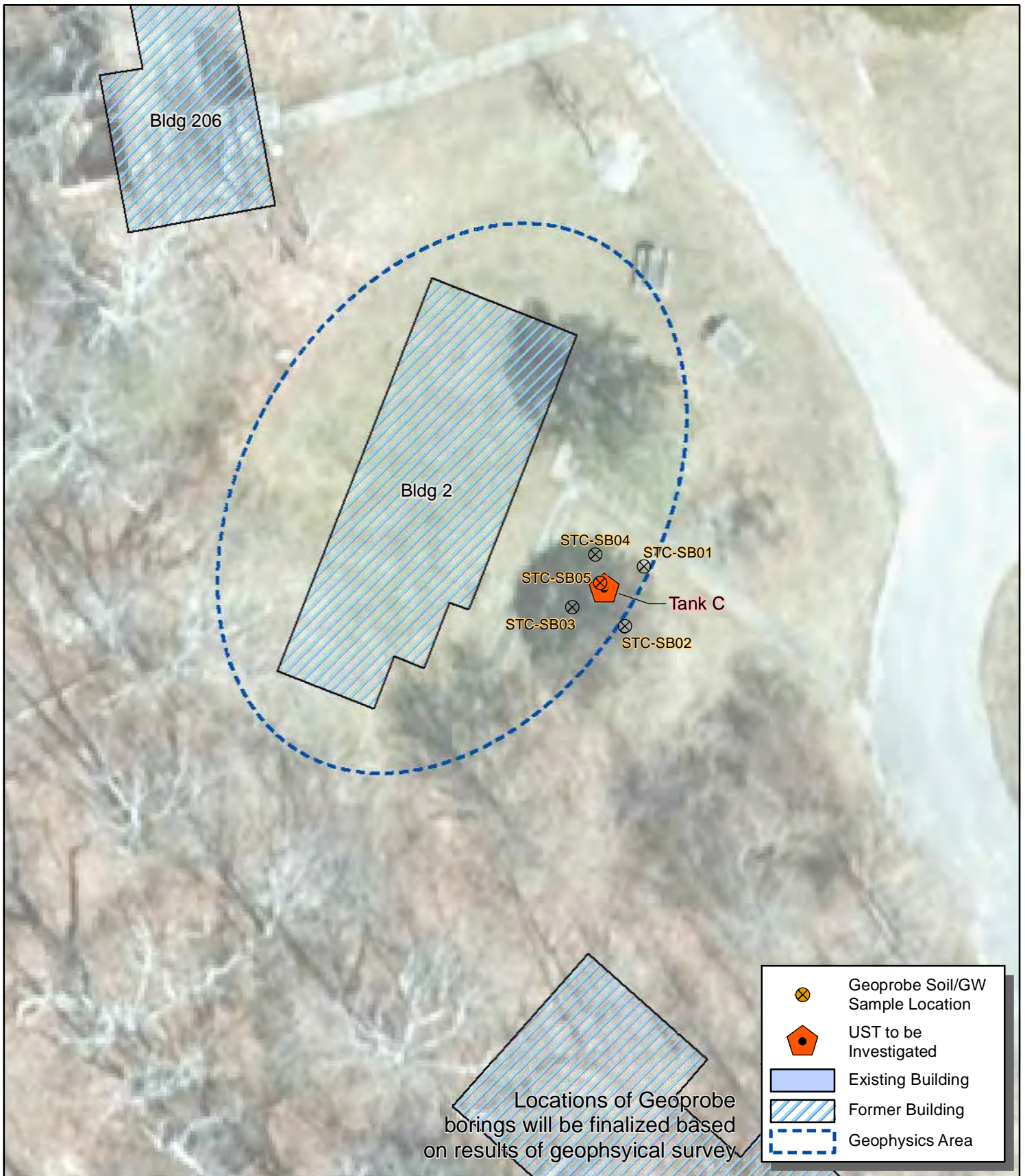


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**Building 22 (Tank B)
Phase 1 RI Sampling Locations**

Camp Hero Remedial Investigation Work Plan

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-8
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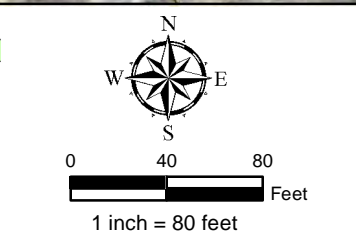
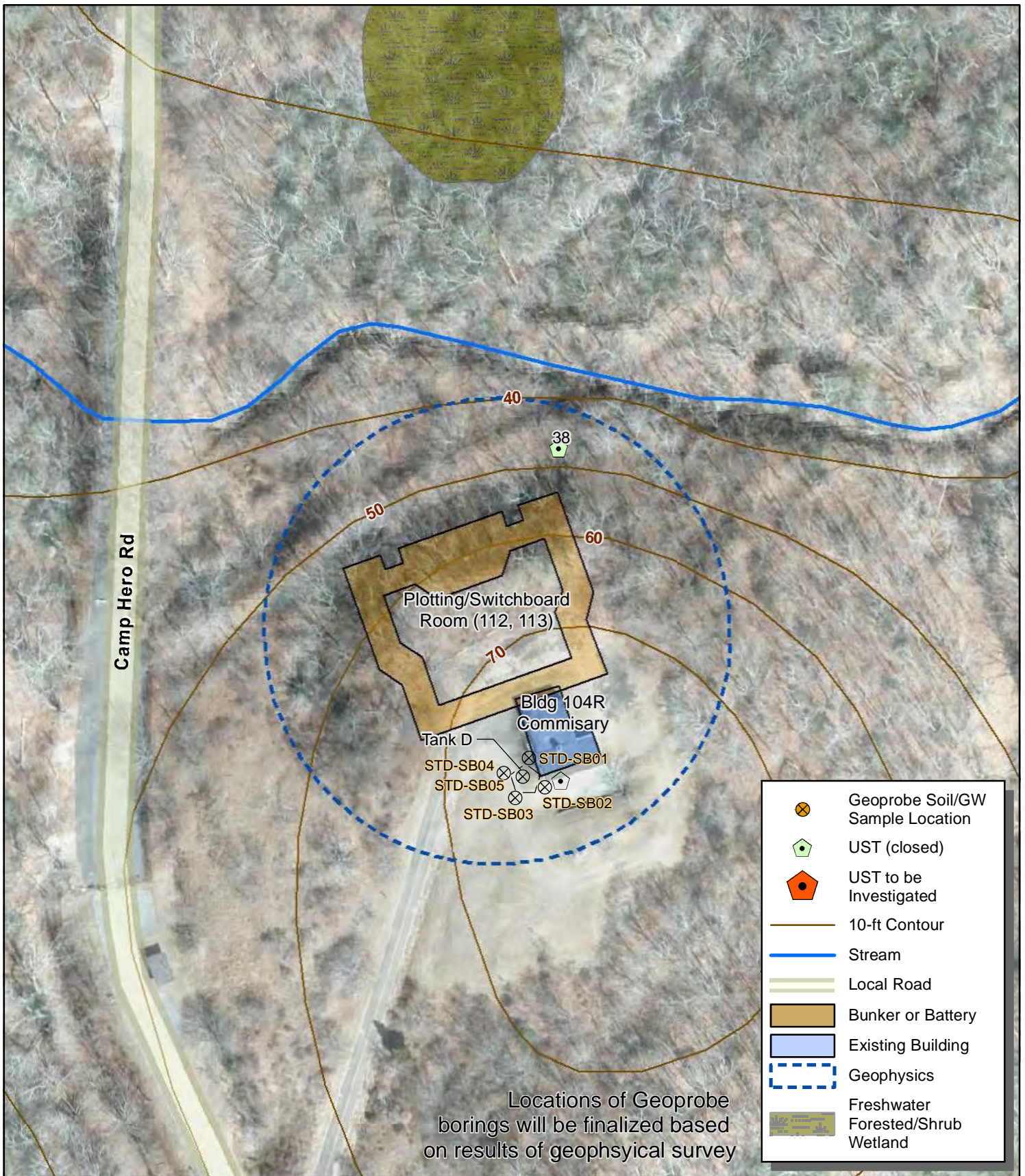
AECOM

**Building 2 (Tank C)
Phase 1 RI Sampling Locations**

Camp Hero Remedial Investigation Work Plan

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MAP LOCATION	NAD 1983 StatePlane Long Island FIPS 3104	PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-9
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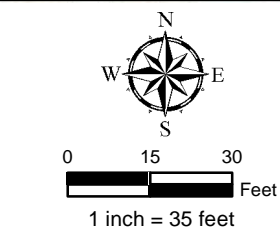
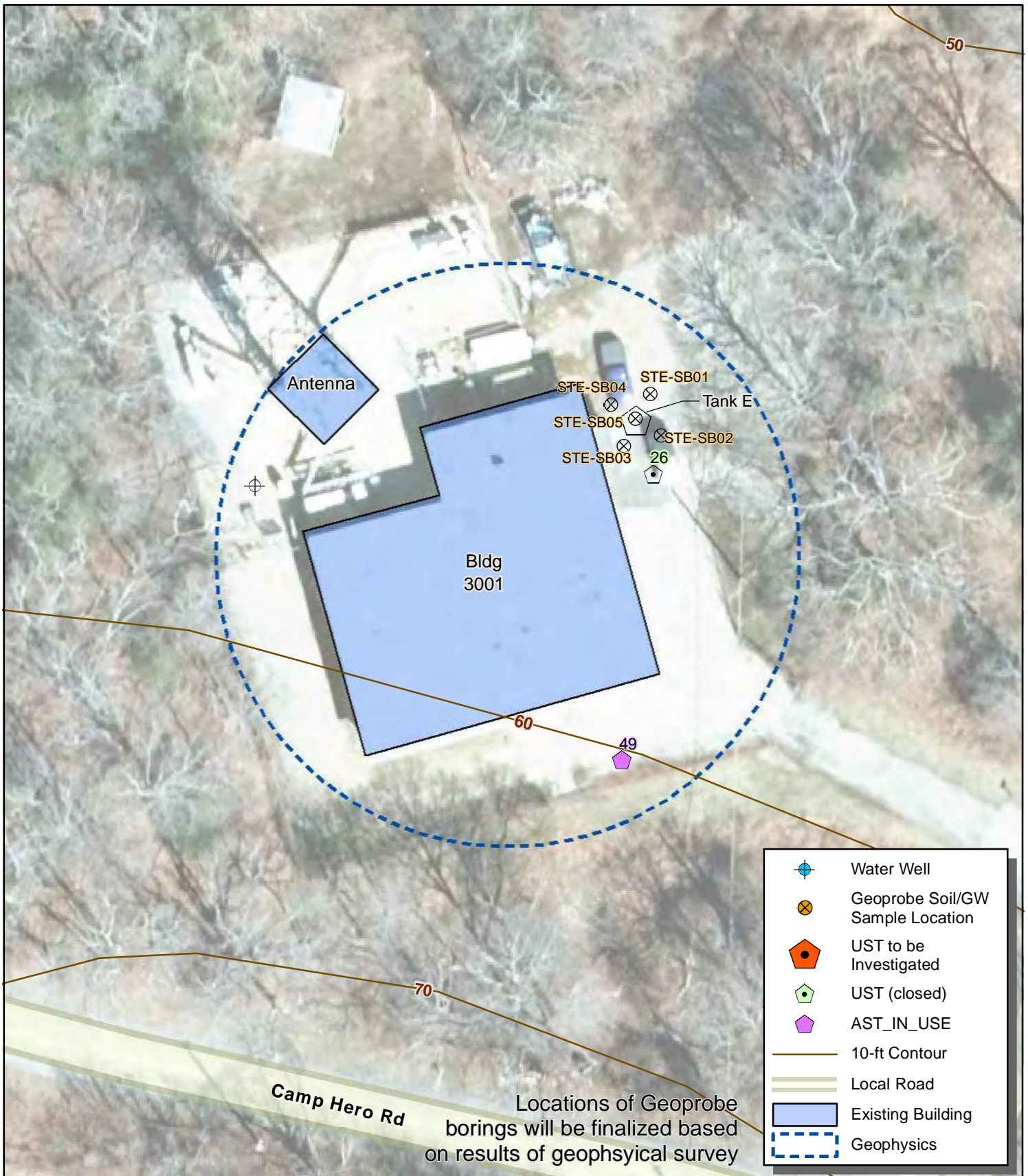
AECOM

Building 104R (Tank D)
Phase 1 RI Sampling Locations

Camp Hero Remedial Investigation Work Plan

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PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-10
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NAD 1983 StatePlane Long Island FIPS 3104



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Building 3001 (Tank E) Phase 1 RI Sampling Locations

Camp Hero Remedial Investigation Work Plan

PROJECT NO.

60443903

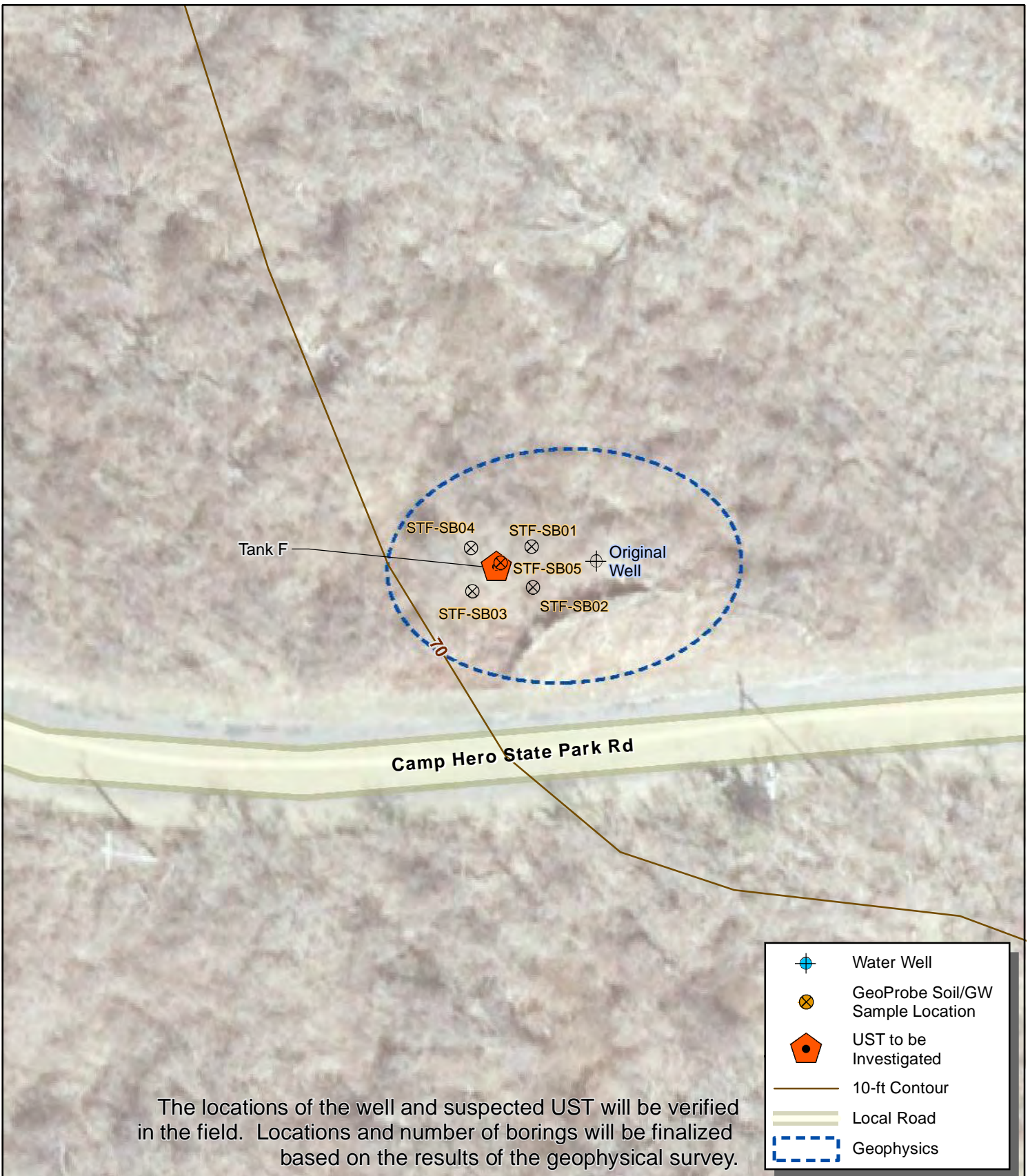
PREPARED BY:

DDS

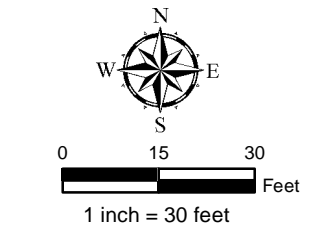
DATE:

May 2016

Figure 6-11



The locations of the well and suspected UST will be verified in the field. Locations and number of borings will be finalized based on the results of the geophysical survey.



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Pump House (Tank F) Phase 1 RI Sampling Locations

Camp Hero Remedial Investigation Work Plan

PROJECT NO.

PREPARED BY:

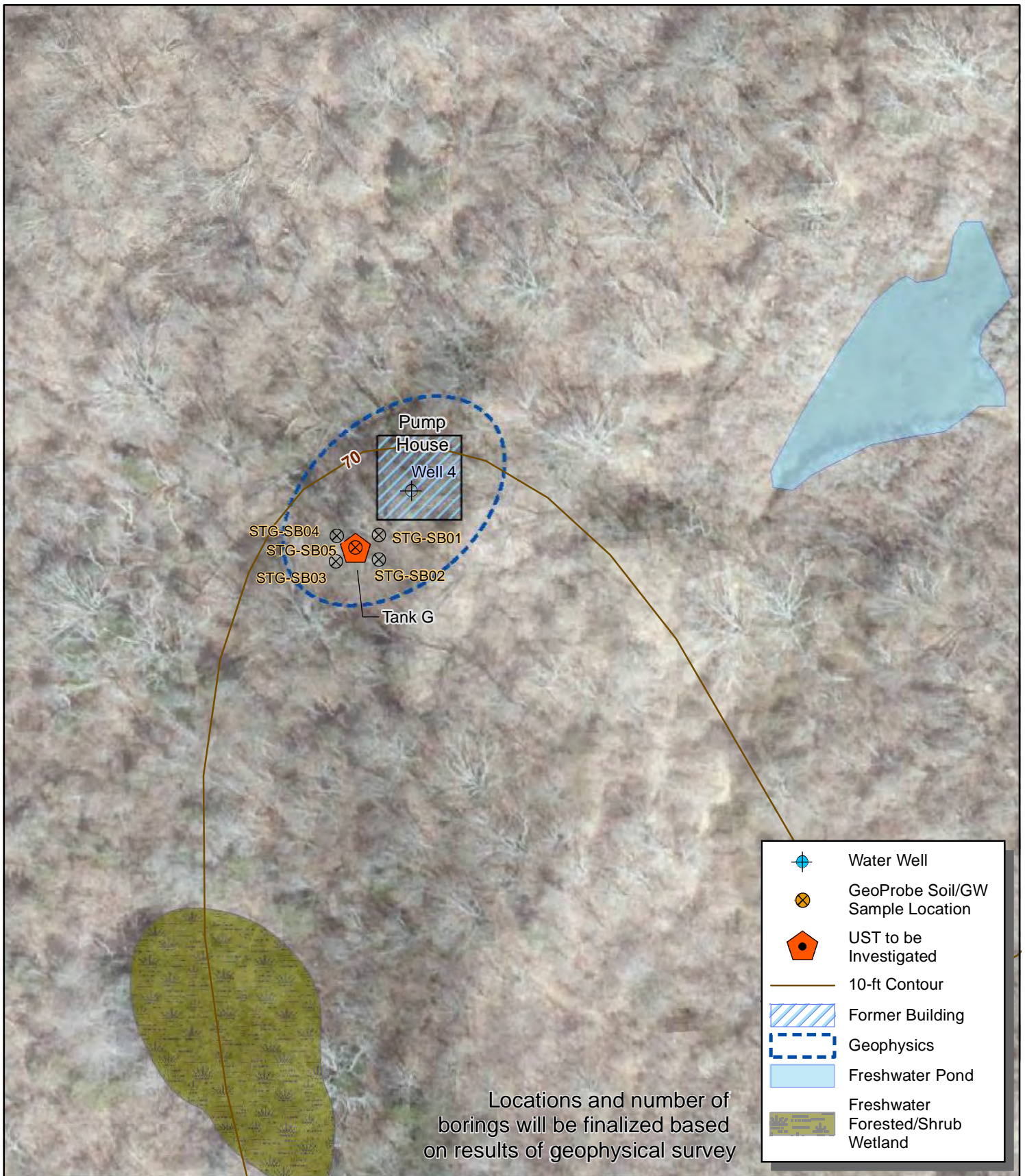
DATE:

60443903

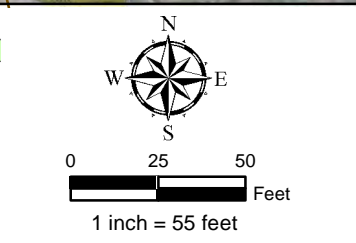
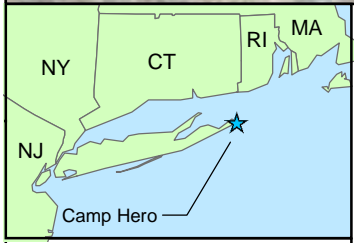
DDS

May 2016

Figure 6-12



- Water Well
- GeoProbe Soil/GW Sample Location
- UST to be Investigated
- 10-ft Contour
- Former Building
- Geophysics
- Freshwater Pond
- Freshwater Forested/Shrub Wetland



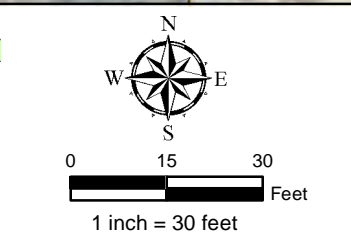
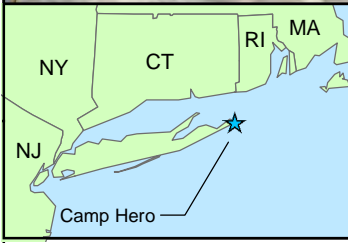
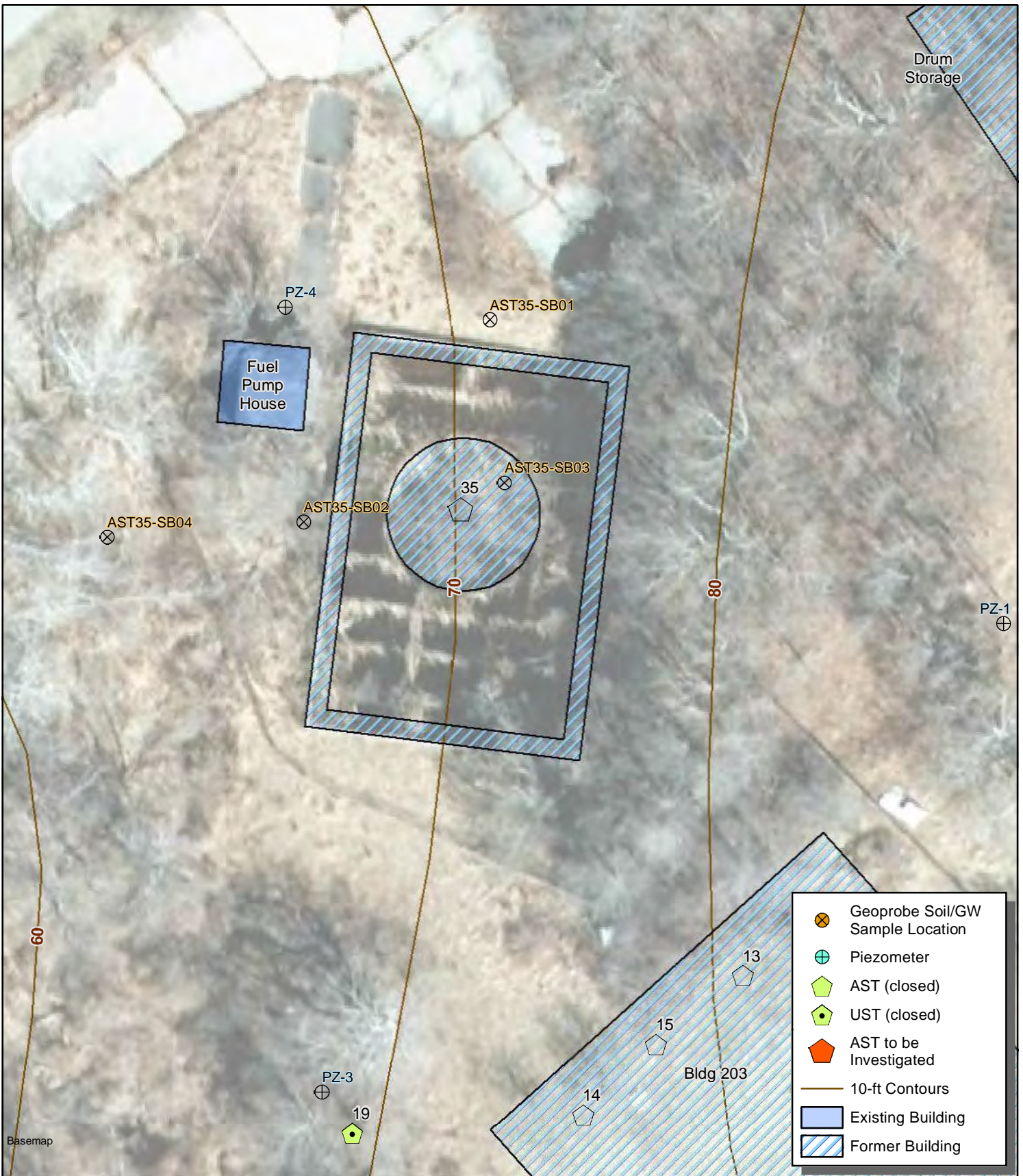
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Arlington, VA 22201
T 703-682-4900 F 703-682-4901

**Pump House (Tank G)
Phase 1 RI Sampling Locations**

Camp Hero Remedial Investigation Work Plan

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016
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Figure 6-13

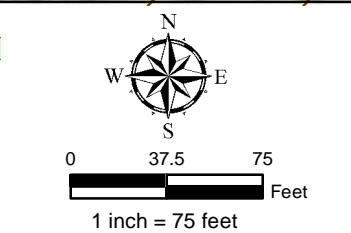
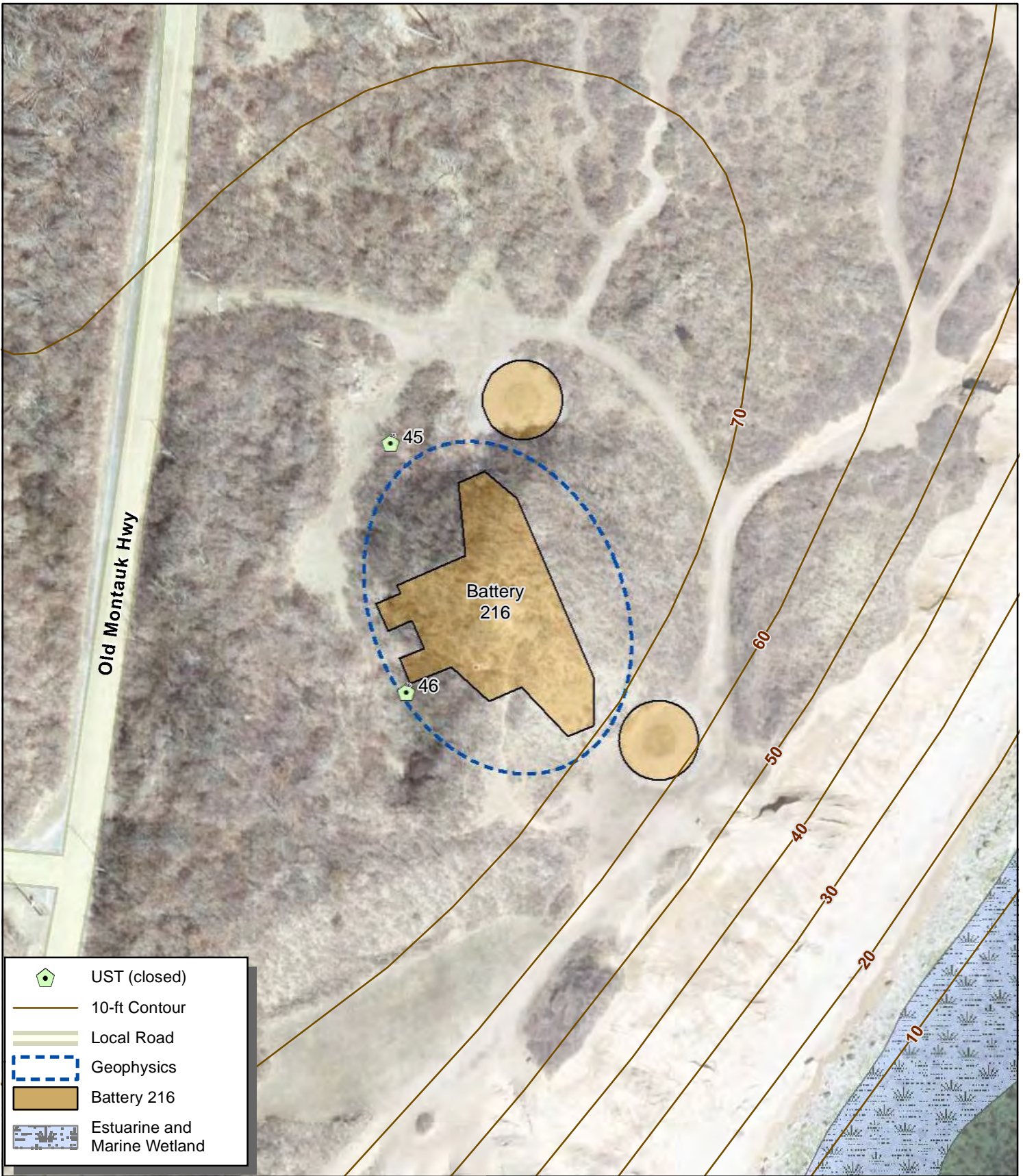


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AST-35 (H-13) Phase 1 RI Sampling Locations

Camp Hero Remedial Investigation Work Plan

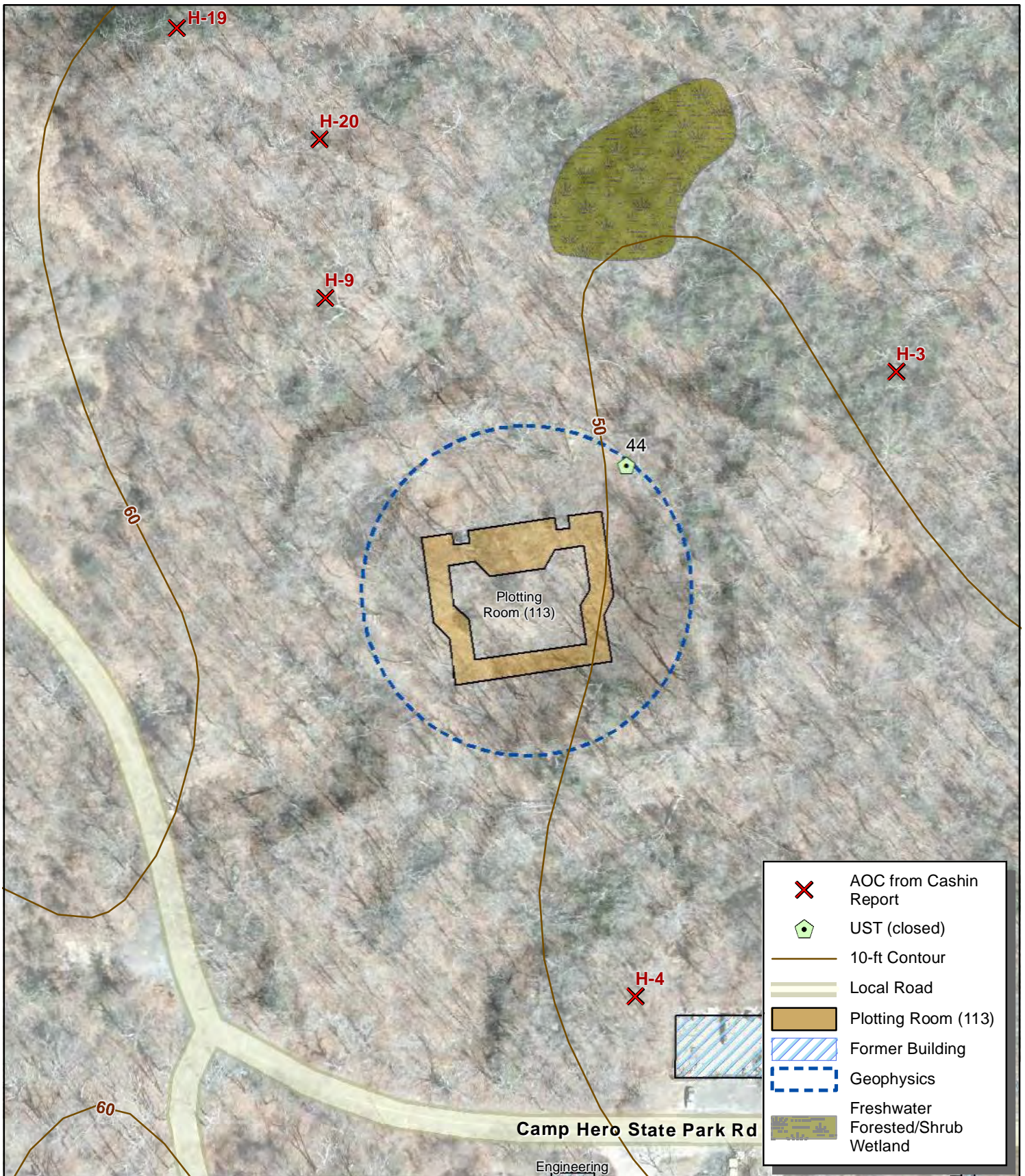
PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-5
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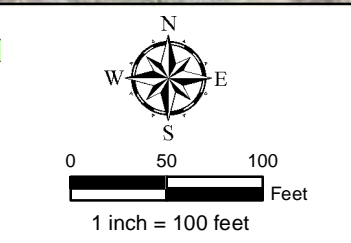
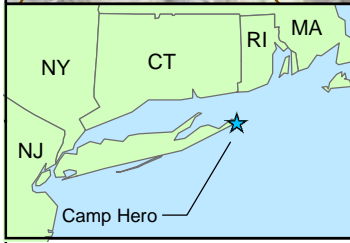
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Arlington, VA 22201
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Battery 216
Phase 1 RI Geophysical Survey Area
Camp Hero Remedial Investigation Work Plan

PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-40
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	AOC from Cashin Report
	UST (closed)
	10-ft Contour
	Local Road
	Plotting Room (113)
	Former Building
	Geophysics
	Freshwater Forested/Shrub Wetland



AECOM

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Plotting Room 113
Phase 1 RI Geophysical Survey Area
Camp Hero Remedial Investigation Work Plan






PROJECT NO. 60443903	PREPARED BY: DDS	DATE: May 2016	Figure 6-41
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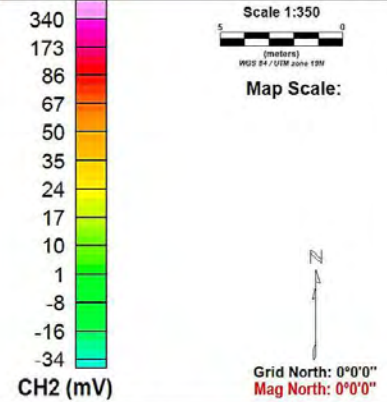
ATTACHMENT C:
METAL DETECTION SUMMARY FIGURES

Building 20 - (Tank A) MAP

Buried Metal Detection Map

LEGEND

-  Effects from Building
(brick cross-hatch)
-  Effects from Fence / Deb
(diamond cross-hatch)
-  + label
above ground feature
(sign w/ label)
-  X label
below ground feature
(sign w/ label)
-  search radius and
squared off work area



Client: USACE Baltimore

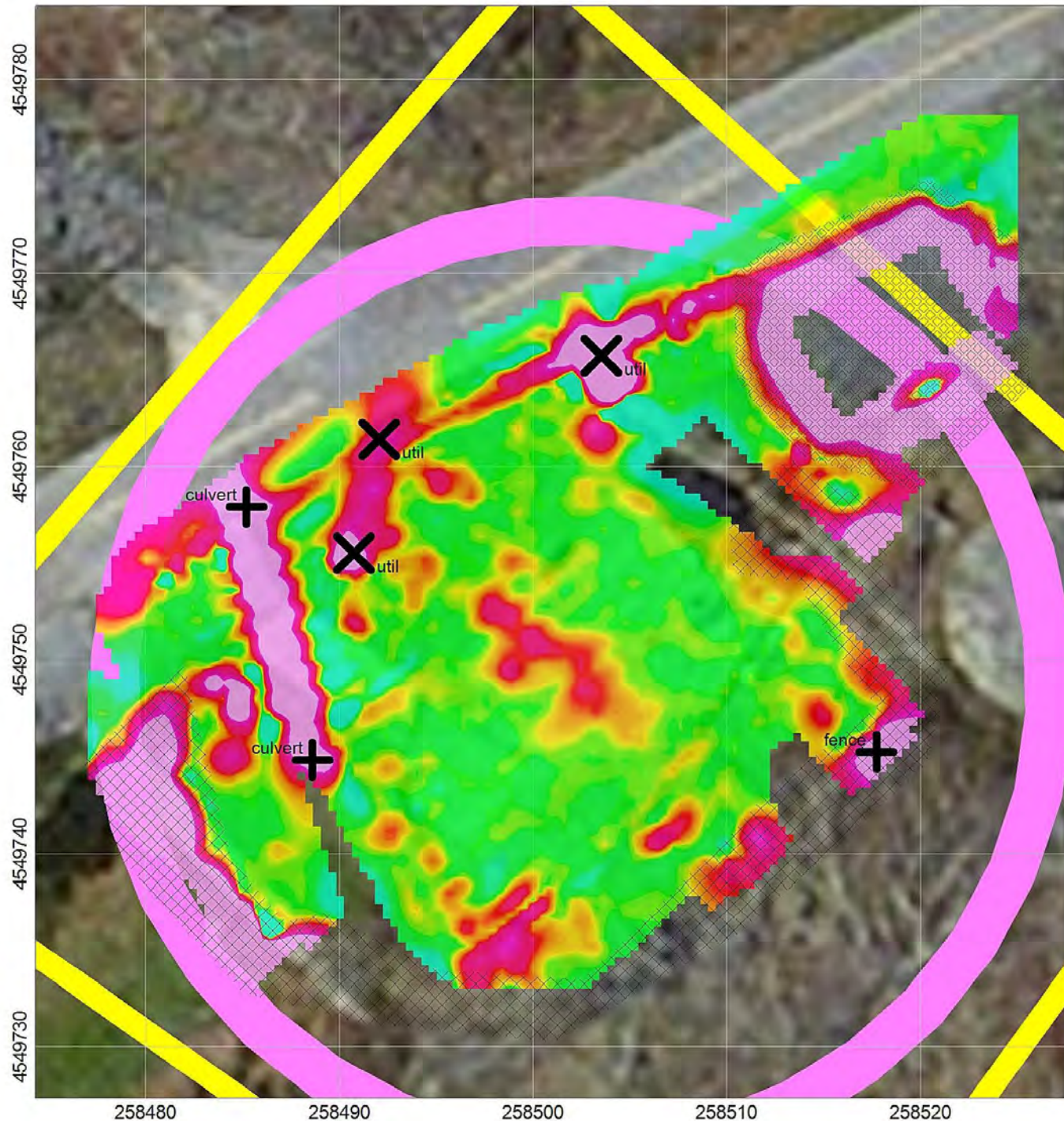
Project: Camp Hero, Montauk, NY

Contractor: AECOM - Tidewater JV

Created by: EC / ME Verified by: BSB

Date: 05/19/2016 File: Building 20

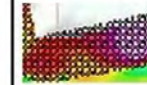
Page number: 1 Approved: BSB



Building 22 - (Tank B) MAP

Buried Metal Detection Map

LEGEND



Effects from Building
(brick cross-hatch)



Effects from Fence / Deb
(diamond cross-hatch)



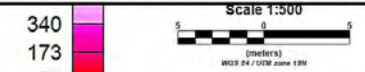
above ground feature
(sign w/ label)



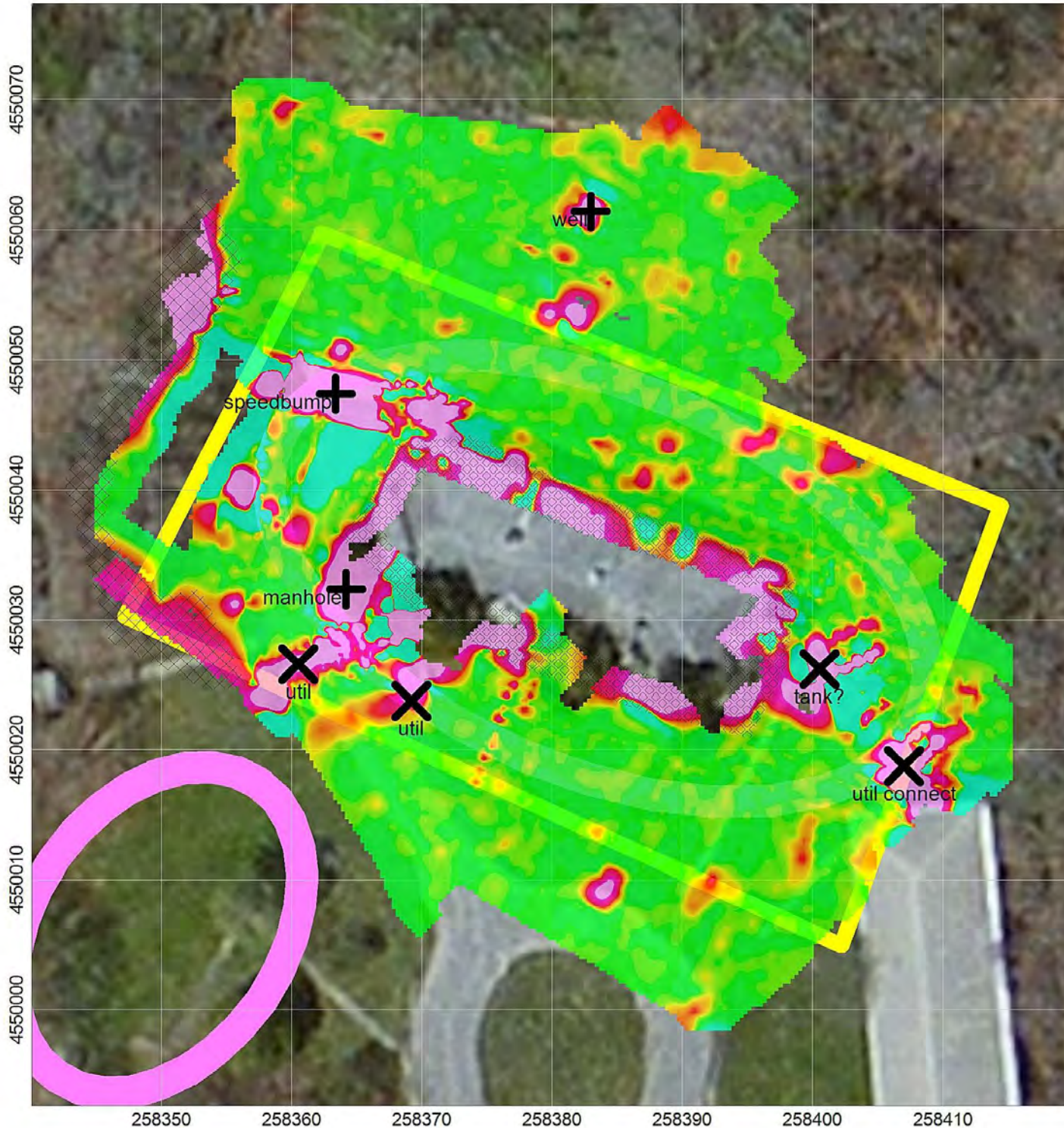
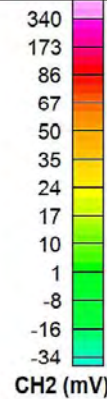
below ground feature
(sign w/ label)



search radius and
squared off work area



Map Scale:



Client: USACE Baltimore District

Project: Camp Hero, Montauk, NY

Contractor: AECOM - Tidewater JV

Created by: EC / ME

Verified by: BSB

Date: 05/17/2016

File: Building 22

Page number: 1

Approved: BSB








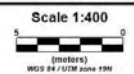
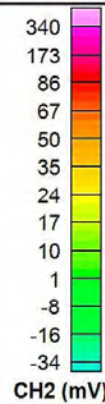
AECOM

Building 2 - (Tank C) MAP

Buried Metal Detection Map

LEGEND

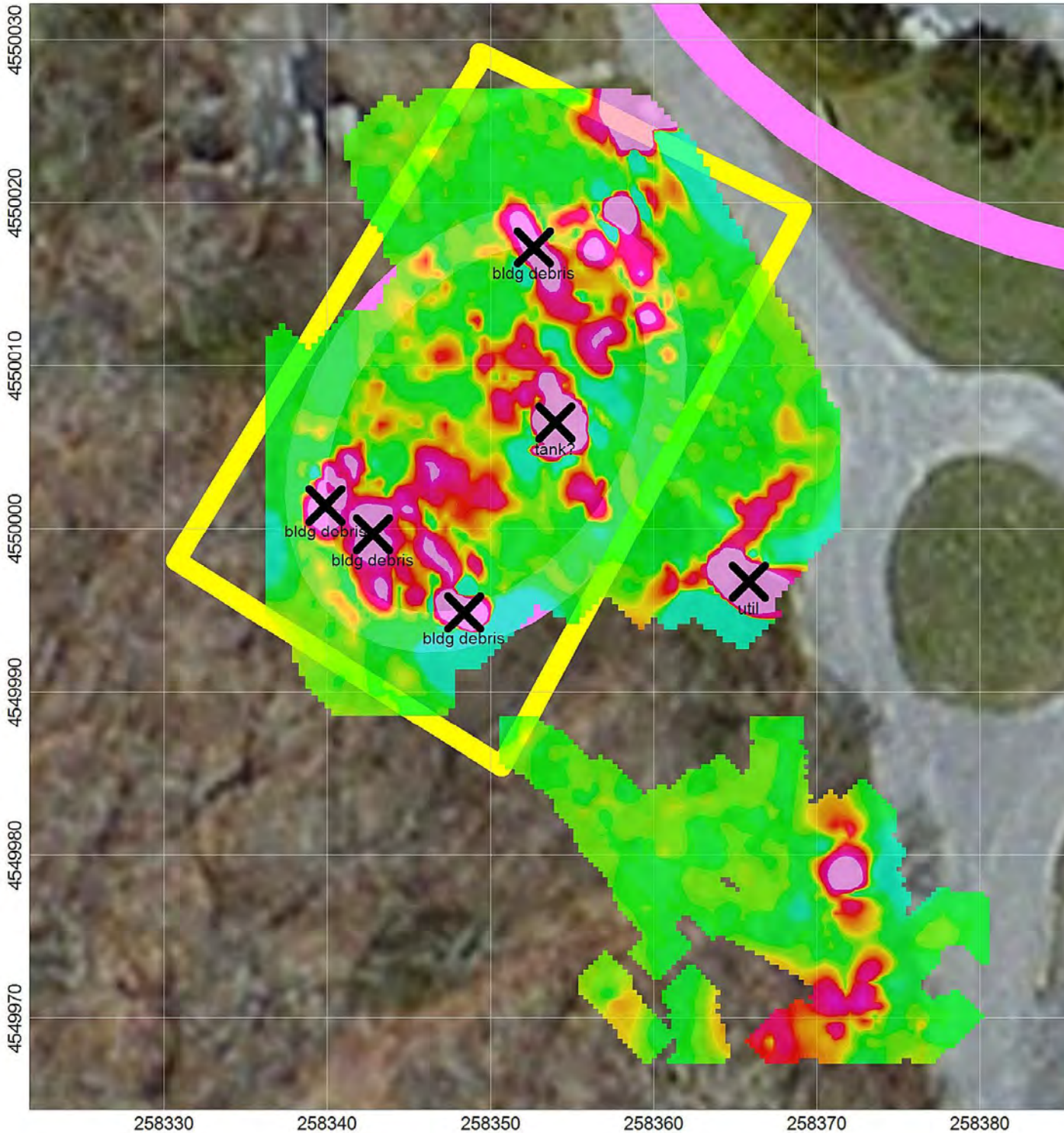
-  Effects from Building
(brick cross-hatch)
-  Effects from Fence / Deb
(diamond cross-hatch)
-  + label
above ground feature
(sign w/ label)
-  X label
below ground feature
(sign w/ label)
-  search radius and
squared off work area



Map Scale:



Grid North: 0°0'0"
Mag North: 0°0'0"








Client: USACE Baltimore	
Project: Camp Hero, Montauk, NY	
Contractor: AECOM - Tidewater JV	
Created by: EC / ME	Verified by: BSB
Date: 05/18/2016	File: Building 2
Page number:	Approved: BSB

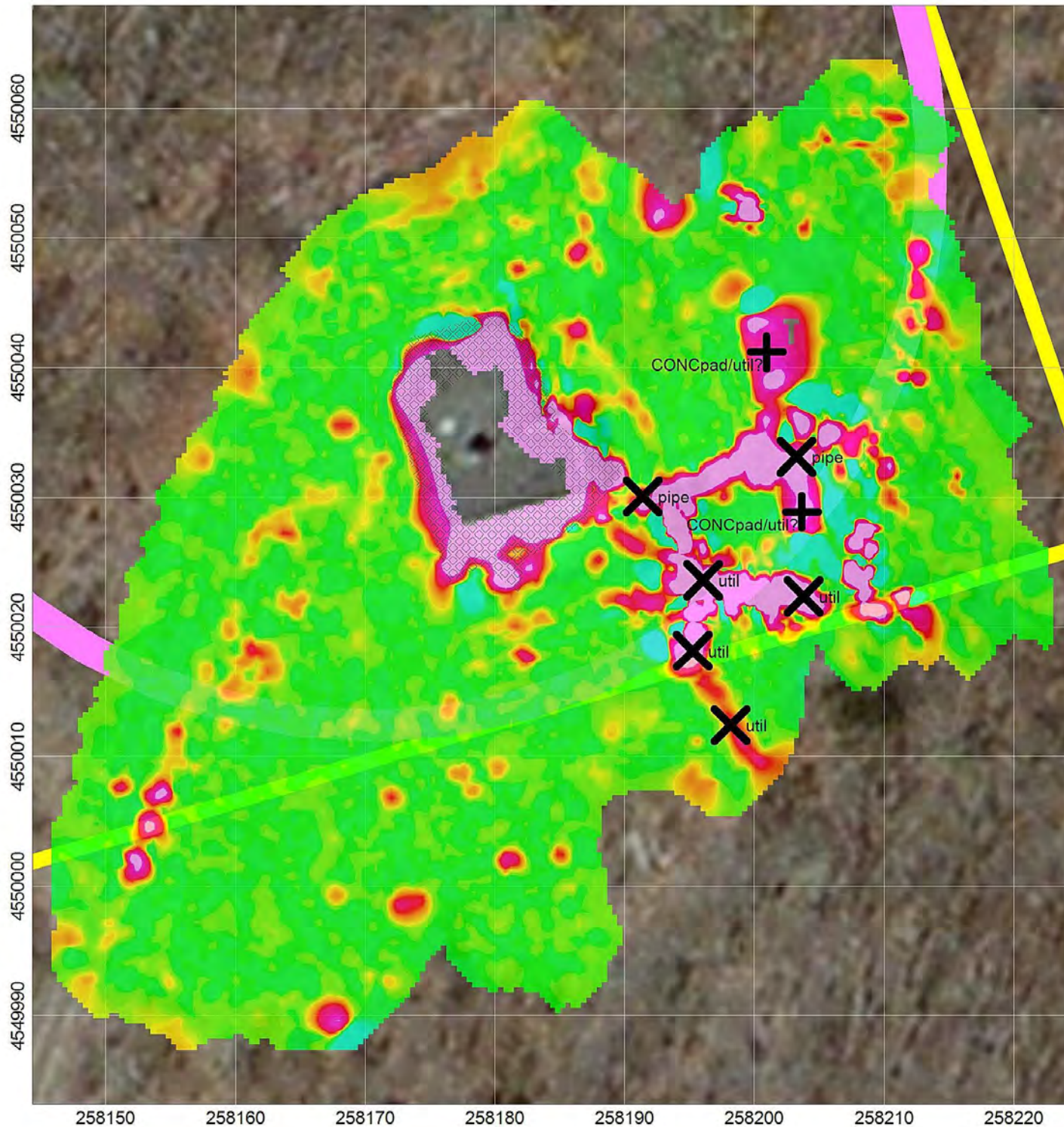
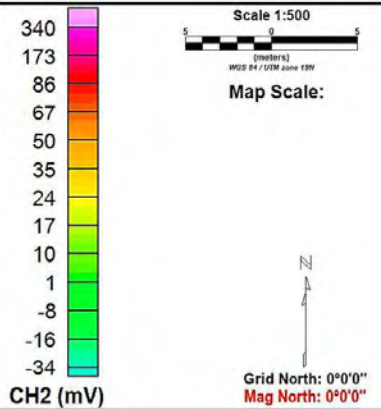


Building 104R - (Tank D) MAP

Buried Metal Detection Map

LEGEND

-  Effects from Building
(brick cross-hatch)
-  Effects from Fence / Deb
(diamond cross-hatch)
-  label above ground feature
(sign w/ label)
-  label below ground feature
(sign w/ label)
-  search radius and
squared off work area








Client: USACE Baltimore District	
Project: Camp Hero, Montauk, NY	
Contractor: AECOM - Tidewater JV	
Created by: EC / ME	Verified by: BSB
Date: 07/18/2016	File: Building 104R
Page number: 1	Approved: BSB

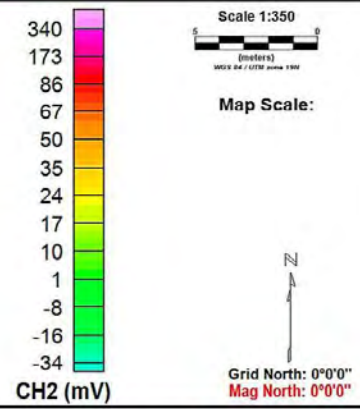


Building 3001 - (tank E) MAP

Buried Metal Detection Map

LEGEND

-  Effects from Building (brick cross-hatch)
-  Effects from Fence / Deb (diamond cross-hatch)
-  + label above ground feature (sign w/ label)
-  X label below ground feature (sign w/ label)
-  search radius and squared off work area



4549900
4549890
4549880
4549870
4549860

258230 258240 258250 258260 258270

Client: USACE Baltimore District

Project: Camp Hero, Montauk, NY

Contractor: AECOM - Tidewater JV

Created by: EC, ME Verified by: BSB

Date: 05/17/2016 File: Building 3001

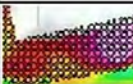




Page number: 1 Approved: BSB

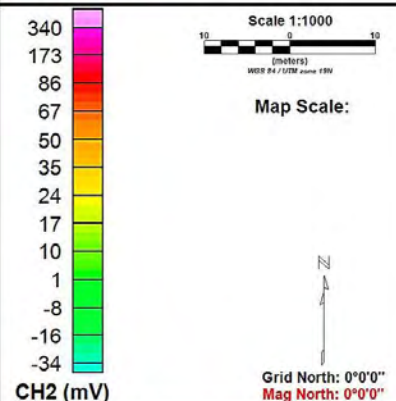


Pump House - (Tank F and Tank G) MAP

Buried Metal Detection Map

LEGEND

-  Effects from Building
(brick cross-hatch)
-  Effects from Fence / Deb
(diamond cross-hatch)
-  + label above ground feature
(sign w/ label)
-  X label below ground feature
(sign w/ label)
-  search radius and
squared off work area



Client: USACE Baltimore

Project: Camp Hero, Montauk, NY

Contractor: AECOM - Tidewater JV

Created by: EC / ME Verified by: BSB

Date: 05/20/2016 File: Building FPH






Page number: 1 Approved: BSB

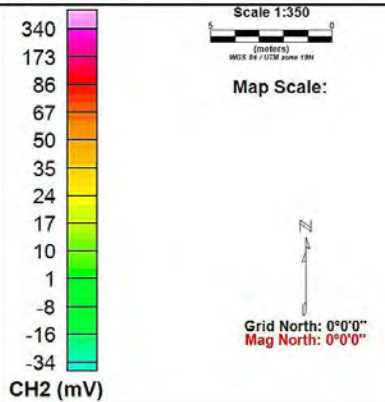


Building FPH - (Tank 35) MAP

Buried Metal Detection Map

LEGEND

-  Effects from Building
(brick cross-hatch)
-  Effects from Fence / Deb
(diamond cross-hatch)
-  + label above ground feature
(sign w/ label)
-  X label below ground feature
(sign w/ label)
-  search radius and
squared off work area



Client: USACE Baltimore

Project: Camp Hero, Montauk, NY

Contractor: AECOM - Tidewater JV

Created by: EC / ME Verified by: BSB

Date: 05/18/2016 File: Building FPH


Page number: 1 Approved: BSB





Battery 216 - (Storage or Vaults) MAP


Buried Metal Detection Map


LEGEND

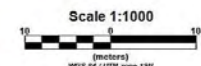
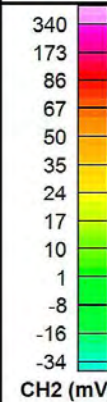
 Effects from Building
(brick cross-hatch)

 Effects from Fence / Deb
(diamond cross-hatch)

 + label
above ground feature
(sign w/ label)

 X label
below ground feature
(sign w/ label)

 search radius and
squared off work area

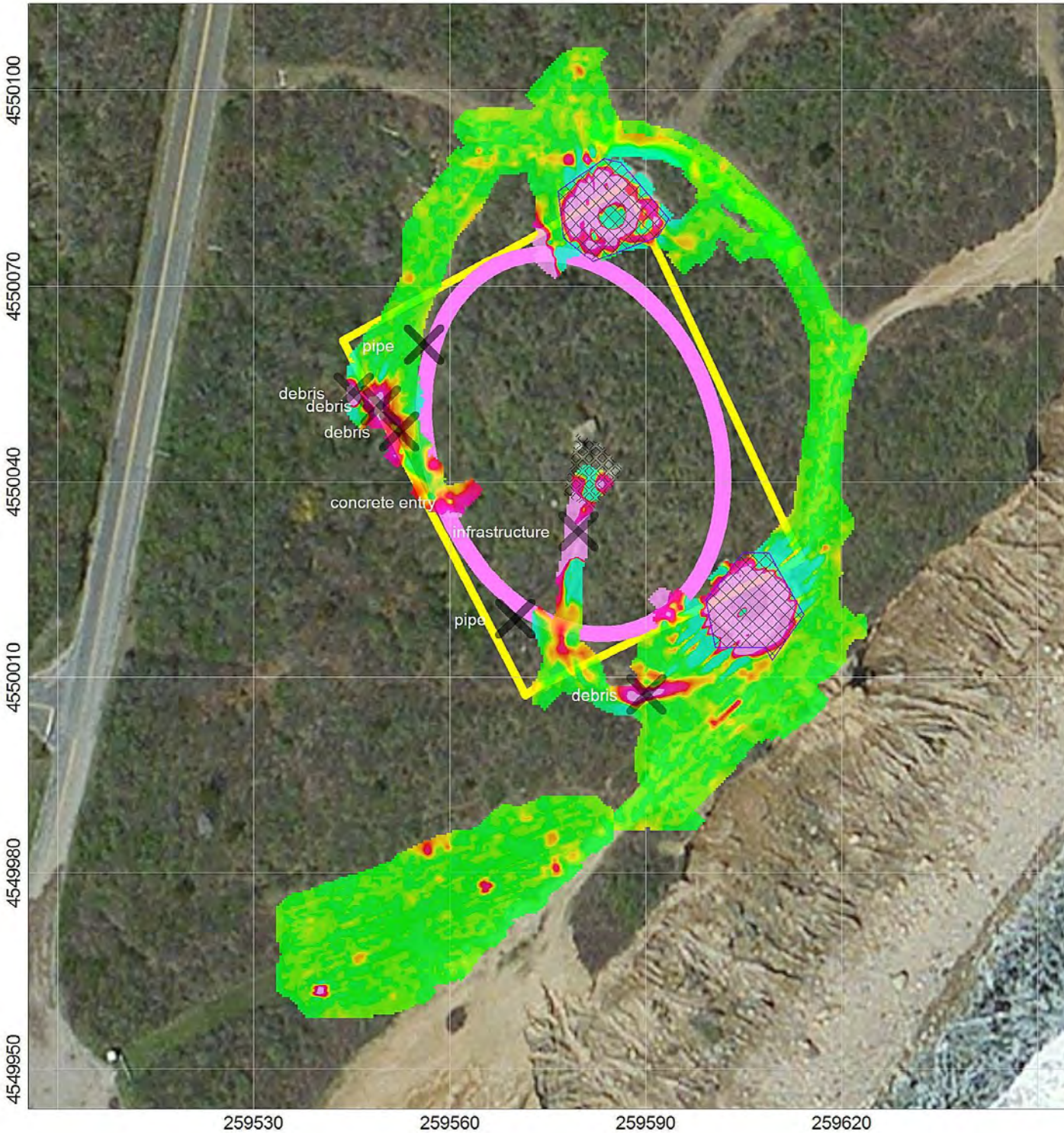


WGS 84 / UTM Zone 18N

Map Scale:



Grid North: 0°0'0"
Mag North: 0°0'0"



Client: USACE Baltimore

Project: Camp Hero, Montauk, NY

Contractor: AECOM - Tidewater JV

Created by: EC / ME

Verified by: BSB

Date: 05/20/2016

File: Battery 216

Page number: 1

Approved: BSB








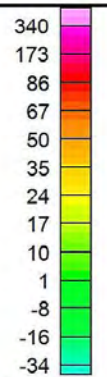
AECOM

Plotting Rm 113 - (Drums) MAP

Buried Metal Detection Map


LEGEND

-  Effects from Building (brick cross-hatch)
-  Effects from Fence / Deb (diamond cross-hatch)
-  + label above ground feature (sign w/ label)
-  X label below ground feature (sign w/ label)
-  search radius and squared off work area




CH2 (mV)

Scale 1:1000

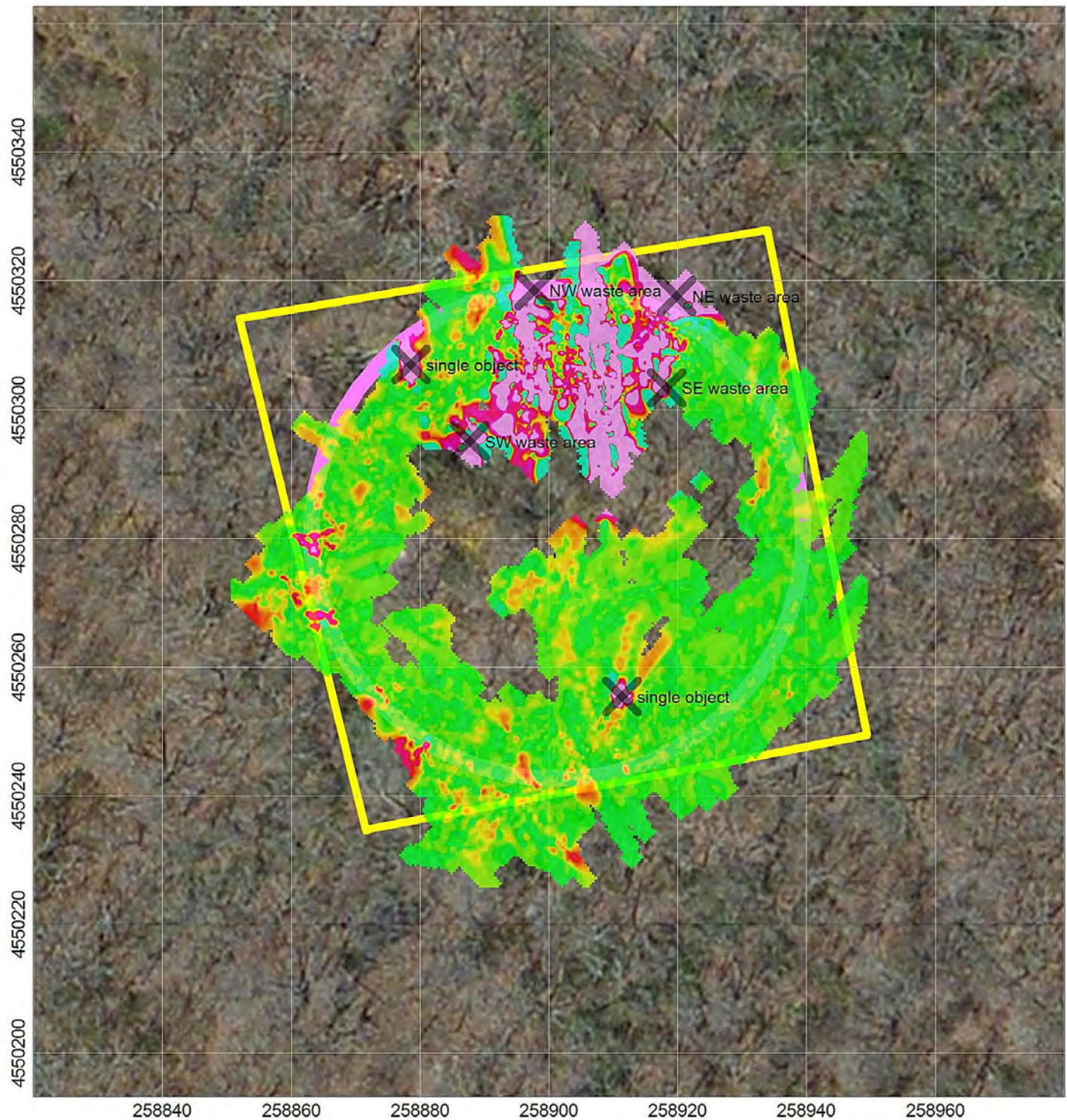


(meters)
WGS 84 / UTM Zone 18U

Map Scale:



Grid North: 0°0'0"
Mag North: 0°0'0"



Client: USACE Baltimore	
Project: Camp Hero, Montauck, NY	
Contractor: AECOM - Tidewater JV	
Created by: EC / ME	Verified by: BSB
Date: 05/20/2016	File: Battery 113
Page number: 1	Approved: BSB



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Attachment F

Community Air Monitoring Data

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===== PuTTY log 2016.06.13 21:18:37 =====

```

"Model Number"          "DataRAM 4 "          106
"Serial no. "           "D330 "
"Device no. "           55
"Tag Number "           1
"Start Time "           09:05:41
"Start Date "           08-Jun-2016
"Log Period "           00:01:00
"Number "               188
"CalFactor "            1
"Unit "                 0
"Unit Name "            "(MASS )ug/m3"
"SIZE_CORRECT"          "DISABLED"
"TEMPUNITS "            F
"Max MASS "             2.521436
"Max MASS @ "           1
"Avg MASS "             0.029097
"Max Diam "             0.339235
"Max Diam @ "           1
"Avg Diam "             0.337463
"ALARM "                "ENABLED"
"ALARM_LEVEL "          2500
"AUTO_ZERO "            "DISABLED"
"AZ INTERVAL "          1
"Errors "               0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	2.5	68	50	0.3392
2	0	68.1	51	0.3375
3	1.7	68.1	51	0.339
4	0.6	68.2	51	0.3354
5	0	68.2	52	0.3375
6	0	68.3	52	0.3375
7	0	68.3	52	0.3375
8	0	68.3	52	0.3375
9	0	68.4	52	0.3375
10	0	68.4	53	0.3375
11	0	68.5	53	0.3375
12	0	68.5	53	0.3375
13	0	68.5	53	0.3375
14	0	68.6	53	0.3375
15	0	68.7	54	0.3375
16	0	68.7	54	0.3375
17	0	68.8	54	0.3375
18	0	68.9	54	0.3375
19	0	68.9	54	0.3375
20	0	69	54	0.3375
21	0	69	54	0.3375
22	0	69.1	54	0.3375
23	0	69.1	54	0.3375
24	0	69.2	54	0.3375
25	0	69.2	54	0.3375
26	0	69.3	54	0.3375
27	0	69.3	54	0.3375
28	0	69.4	54	0.3375
29	0	69.4	54	0.3375
30	0	69.4	54	0.3375
31	0	69.6	54	0.3375
32	0	69.6	54	0.3375
33	0	69.7	54	0.3375
34	0	69.8	54	0.3375
35	0	69.8	54	0.3375
36	0	69.8	54	0.3375
37	0	69.9	54	0.3375

===== PuTTY log 2016.06.13 21:18:37 =====

```

"Model Number"          "DataRAM 4 "          106
"Serial no. "           "D330 "
"Device no. "           55
"Tag Number "           1
"Start Time "           09:05:41
"Start Date "           08-Jun-2016
"Log Period "           00:01:00
"Number "               188
"CalFactor "            1
"Unit "                 0
"Unit Name "            "(MASS )ug/m3"
"SIZE_CORRECT"          "DISABLED"
"TEMPUNITS "            F
"Max MASS "             2.521436
"Max MASS @ "           1
"Avg MASS "             0.029097
"Max Diam "             0.339235
"Max Diam @ "           1
"Avg Diam "             0.337463
"ALARM "                "ENABLED"
"ALARM_LEVEL "          2500
"AUTO_ZERO "            "DISABLED"
"AZ INTERVAL "          1
"Errors "               0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	69.9	54	0.3375
39	0	70	54	0.3375
40	0	70	54	0.3375
41	0	70.1	54	0.3375
42	0	70.1	54	0.3375
43	0	70.2	54	0.3375
44	0	70.2	54	0.3375
45	0	70.3	54	0.3375
46	0	70.3	54	0.3375
47	0	70.5	53	0.3375
48	0	70.6	53	0.3375
49	0	70.6	53	0.3375
50	0	70.7	53	0.3375
51	0	70.8	53	0.3375
52	0	70.9	53	0.3375
53	0	70.9	53	0.3375
54	0	71	53	0.3375
55	0	71.1	53	0.3375
56	0	71.2	53	0.3375
57	0	71.3	53	0.3375
58	0	71.5	53	0.3375
59	0	71.6	53	0.3375
60	0	71.7	53	0.3375
61	0	71.9	53	0.3375
62	0	72	53	0.3375
63	0	72.1	53	0.3375
64	0	72.4	53	0.3375
65	0	72.5	53	0.3375
66	0	72.7	52	0.3375
67	0	72.8	52	0.3375
68	0	72.9	52	0.3375
69	0	73.1	52	0.3375
70	0	73.3	52	0.3375
71	0	73.4	52	0.3375
72	0	73.6	52	0.3375
73	0	73.7	51	0.3375
74	0	73.9	51	0.3375

===== PuTTY log 2016.06.13 21:18:37 =====

```

"Model Number"          "DataRAM 4 "          106
"Serial no. "           "D330 "
"Device no. "           55
"Tag Number "           1
"Start Time "           09:05:41
"Start Date "           08-Jun-2016
"Log Period "           00:01:00
"Number "               188
"CalFactor "            1
"Unit "                 0
"Unit Name "            "(MASS )ug/m3"
"SIZE_CORRECT"          "DISABLED"
"TEMPUNITS "            F
"Max MASS "             2.521436
"Max MASS @ "           1
"Avg MASS "             0.029097
"Max Diam "             0.339235
"Max Diam @ "           1
"Avg Diam "             0.337463
"ALARM "                "ENABLED"
"ALARM_LEVEL "          2500
"AUTO_ZERO "            "DISABLED"
"AZ INTERVAL "          1
"Errors "               0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	0	74	51	0.3375
76	0	74.2	51	0.3375
77	0	74.4	51	0.3375
78	0	74.5	51	0.3375
79	0	74.7	50	0.3375
80	0	74.9	50	0.3375
81	0	75.1	50	0.3375
82	0	75.3	50	0.3375
83	0	75.5	50	0.3375
84	0	75.7	50	0.3375
85	0	75.9	50	0.3375
86	0	76.1	50	0.3375
87	0	76.3	49	0.3375
88	0	76.5	49	0.3375
89	0	76.7	49	0.3375
90	0	76.9	49	0.3375
91	0	77.1	49	0.3375
92	0	77.3	49	0.3375
93	0	77.4	49	0.3375
94	0	77.6	49	0.3375
95	0	77.9	49	0.3375
96	0	78	48	0.3375
97	0	78.2	48	0.3375
98	0	78.4	48	0.3375
99	0	78.6	48	0.3375
100	0	78.7	48	0.3375
101	0	78.9	47	0.3375
102	0	79	47	0.3375
103	0	79.1	47	0.3375
104	0	79.2	47	0.3375
105	0	79.3	47	0.3375
106	0	79.4	47	0.3375
107	0	79.5	46	0.3375
108	0	79.6	46	0.3375
109	0	79.7	46	0.3375
110	0	79.7	46	0.3375
111	0	79.7	46	0.3375

===== PuTTY log 2016.06.13 21:18:37 =====

```

"Model Number"          "DataRAM 4 "          106
"Serial no. "           "D330 "
"Device no. "           55
"Tag Number "           1
"Start Time "           09:05:41
"Start Date "           08-Jun-2016
"Log Period "           00:01:00
"Number "               188
"CalFactor "            1
"Unit "                 0
"Unit Name "            "(MASS )ug/m3"
"SIZE_CORRECT"          "DISABLED"
"TEMPUNITS "            F
"Max MASS "             2.521436
"Max MASS @ "           1
"Avg MASS "             0.029097
"Max Diam "             0.339235
"Max Diam @ "           1
"Avg Diam "             0.337463
"ALARM "                "ENABLED"
"ALARM_LEVEL "          2500
"AUTO_ZERO "            "DISABLED"
"AZ INTERVAL "          1
"Errors "               0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	0	79.8	45	0.3375
113	0	79.8	45	0.3375
114	0	79.8	45	0.3375
115	0	79.8	45	0.3375
116	0	79.8	45	0.3375
117	0	79.8	44	0.3375
118	0	79.8	44	0.3375
119	0	79.8	44	0.3375
120	0	79.8	44	0.3375
121	0	79.8	44	0.3375
122	0	79.7	44	0.3375
123	0	79.7	43	0.3375
124	0	79.7	43	0.3375
125	0	79.6	43	0.3375
126	0	79.6	43	0.3375
127	0	79.4	43	0.3375
128	0	79.4	43	0.3375
129	0	79.3	43	0.3375
130	0	79.2	42	0.3375
131	0	79.2	42	0.3375
132	0	79.1	42	0.3375
133	0	79	42	0.3375
134	0	79	42	0.3375
135	0	79	42	0.3375
136	0	78.9	42	0.3375
137	0	78.8	41	0.3375
138	0	78.7	41	0.3375
139	0	78.5	41	0.3375
140	0	78.5	41	0.3375
141	0	78.4	41	0.3375
142	0	78.3	41	0.3375
143	0	78.3	41	0.3375
144	0	78.2	41	0.3375
145	0	78.1	41	0.3375
146	0	78.1	41	0.3375
147	0	78	41	0.3375
148	0	78	41	0.3375

===== PuTTY log 2016.06.13 21:18:37 =====

```

"Model Number"          "DataRAM 4 "          106
"Serial no. "           "D330 "
"Device no. "           55
"Tag Number "           1
"Start Time "           09:05:41
"Start Date "           08-Jun-2016
"Log Period "           00:01:00
"Number "               188
"CalFactor "            1
"Unit "                 0
"Unit Name "            "(MASS )ug/m3"
"SIZE_CORRECT"         "DISABLED"
"TEMPUNITS "           F
"Max MASS "             2.521436
"Max MASS @ "           1
"Avg MASS "             0.029097
"Max Diam "             0.339235
"Max Diam @ "           1
"Avg Diam "             0.337463
"ALARM "                "ENABLED"
"ALARM_LEVEL "         2500
"AUTO_ZERO "            "DISABLED"
"AZ INTERVAL "         1
"Errors "               0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
149	0	77.9	41	0.3375
150	0	77.9	41	0.3375
151	0	77.8	41	0.3375
152	0	77.7	41	0.3375
153	0	77.6	41	0.3375
154	0	77.5	41	0.3375
155	0	77.5	41	0.3375
156	0	77.4	41	0.3375
157	0	77.4	41	0.3375
158	0	77.3	41	0.3375
159	0	77.3	41	0.3375
160	0	77.2	41	0.3375
161	0	77.2	41	0.3375
162	0	77.1	41	0.3375
163	0	77.1	41	0.3375
164	0	77	41	0.3375
165	0	77	41	0.3375
166	0	77	42	0.3375
167	0	77	41	0.3375
168	0	76.9	42	0.3375
169	0	76.9	42	0.3375
170	0	76.9	42	0.3375
171	0	76.8	42	0.3375
172	0	76.8	42	0.3375
173	0	76.6	42	0.3375
174	0	76.6	42	0.3375
175	0	76.6	42	0.3375
176	0	76.5	42	0.3375
177	0	76.5	42	0.3375
178	0	76.5	42	0.3375
179	0	76.5	42	0.3375
180	0	76.5	42	0.3375
181	0	76.5	42	0.3375
182	0	76.5	42	0.3375
183	0	76.6	42	0.3375
184	0	76.6	43	0.3375
185	0	76.7	43	0.3375

===== PuTTY log 2016.06.13 21:18:37 =====

"Model Number" "DataRAM 4 " 106
"Serial no. " "D330 " "
"Device no. " 55
"Tag Number " 1
"Start Time " 09:05:41
"Start Date " 08-Jun-2016
"Log Period " 00:01:00
"Number " 188
"CalFactor " 1
"Unit " 0
"Unit Name " "(MASS)ug/m3"
"SIZE_CORRECT" "DISABLED"
"TEMPUNITS " F
"Max MASS " 2.521436
"Max MASS @ " 1
"Avg MASS " 0.029097
"Max Diam " 0.339235
"Max Diam @ " 1
"Avg Diam " 0.337463
"ALARM " "ENABLED"
"ALARM_LEVEL " 2500
"AUTO_ZERO " "DISABLED"
"AZ INTERVAL " 1
"Errors " 0

record	(MASS)ug/m3	Temp	RHumidity	Diameter
186	0	76.8	43	0.3375
187	0	76.9	43	0.3375
188	0.7	77	43	0.3312

"Model Number" "DataRAM 4 " 106
 "Serial no. " "D330 "
 "Device no. " 55
 "Tag Number " 2
 "Start Time " 09:00:27
 "Start Date " 09-Jun-2016
 "Log Period " 00:01:00
 "Number " 72
 "CalFactor " 1
 "Unit " 0
 "Unit Name " "(MASS)ug/m3"
 "SIZE_CORRECT" "DISABLED"
 "TEMPUNITS " F
 "Max MASS " 3.141058
 "Max MASS @ " 1
 "Avg MASS " 2.358987
 "Max Diam " 0.479832
 "Max Diam @ " 13
 "Avg Diam " 0.42793
 "ALARM " "ENABLED"
 "ALARM_LEVEL " 2500
 "AUTO_ZERO " "DISABLED"
 "AZ INTERVAL " 1
 "Errors " 0

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	3.1	64.6	47	0.4362
2	2.1	64.5	48	0.4298
3	2.2	64.5	48	0.4235
4	2.6	64.5	49	0.4443
5	2.7	64.5	49	0.4449
6	2.1	64.5	49	0.4189
7	2.1	64.4	50	0.4186
8	2.4	64.5	50	0.4294
9	2	64.5	50	0.4154
10	2.4	64.5	50	0.4286
11	2.8	64.5	50	0.4497
12	2.5	64.5	51	0.4339
13	2.8	64.5	51	0.4798
14	2	64.5	51	0.4206
15	2.2	64.5	51	0.4283
16	2.3	64.5	51	0.4324
17	2.5	64.6	51	0.4425
18	2.1	64.6	51	0.4218
19	1.7	64.6	51	0.4058
20	2.6	64.6	51	0.4439
21	2.3	64.6	52	0.4317

"Model Number" "DataRAM 4 " 106
 "Serial no. " "D330 "
 "Device no. " 55
 "Tag Number " 2
 "Start Time " 09:00:27
 "Start Date " 09-Jun-2016
 "Log Period " 00:01:00
 "Number " 72
 "CalFactor " 1
 "Unit " 0
 "Unit Name " "(MASS)ug/m3"
 "SIZE_CORRECT" "DISABLED"
 "TEMPUNITS " F
 "Max MASS " 3.141058
 "Max MASS @ " 1
 "Avg MASS " 2.358987
 "Max Diam " 0.479832
 "Max Diam @ " 13
 "Avg Diam " 0.42793
 "ALARM " "ENABLED"
 "ALARM_LEVEL " 2500
 "AUTO_ZERO " "DISABLED"
 "AZ INTERVAL " 1
 "Errors " 0

record	(MASS)ug/m3	Temp	RHumidity	Diameter
22	2.9	64.6	51	0.4608
23	2.5	64.7	52	0.435
24	2.8	64.7	52	0.4479
25	2.2	64.7	52	0.4281
26	2.2	64.8	52	0.4123
27	2.4	64.8	52	0.41
28	1.9	64.8	52	0.397
29	2.4	64.8	52	0.4187
30	2.4	64.9	52	0.4269
31	1.4	64.9	52	0.387
32	2	64.9	52	0.4125
33	2	64.9	52	0.4076
34	2.2	64.9	52	0.4162
35	2.9	65	52	0.456
36	2.5	65	52	0.4405
37	2.9	65	52	0.4611
38	2.2	65.1	52	0.4348
39	2	65.1	52	0.4235
40	2.4	65.1	52	0.4442
41	2.2	65.2	52	0.4393
42	2.2	65.2	52	0.4342

"Model Number" "DataRAM 4 " 106
 "Serial no. " "D330 "
 "Device no. " 55
 "Tag Number " 2
 "Start Time " 09:00:27
 "Start Date " 09-Jun-2016
 "Log Period " 00:01:00
 "Number " 72
 "CalFactor " 1
 "Unit " 0
 "Unit Name " "(MASS)ug/m3"
 "SIZE_CORRECT" "DISABLED"
 "TEMPUNITS " F
 "Max MASS " 3.141058
 "Max MASS @ " 1
 "Avg MASS " 2.358987
 "Max Diam " 0.479832
 "Max Diam @ " 13
 "Avg Diam " 0.42793
 "ALARM " "ENABLED"
 "ALARM_LEVEL " 2500
 "AUTO_ZERO " "DISABLED"
 "AZ INTERVAL " 1
 "Errors " 0

record	(MASS)ug/m3	Temp	RHumidity	Diameter
43	3	65.2	52	0.473
44	2.3	65.2	52	0.4376
45	2.5	65.3	52	0.4438
46	2.3	65.3	52	0.4416
47	3.1	65.3	52	0.4692
48	2	65.4	52	0.4083
49	2.5	65.3	52	0.4314
50	2.9	65.4	52	0.4424
51	2.6	65.4	52	0.4313
52	2.6	65.4	52	0.4346
53	2.2	65.5	52	0.4109
54	2.5	65.5	52	0.4215
55	2.2	65.5	52	0.4064
56	2.2	65.5	52	0.4063
57	2	65.5	52	0.4007
58	2.2	65.6	52	0.405
59	2.1	65.6	52	0.4019
60	2.2	65.6	52	0.404
61	2.6	65.6	52	0.4163
62	2.3	65.6	52	0.4157
63	2.2	65.7	52	0.4102

"Model Number" "DataRAM 4 " 106
 "Serial no. " "D330 "
 "Device no. " 55
 "Tag Number " 2
 "Start Time " 09:00:27
 "Start Date " 09-Jun-2016
 "Log Period " 00:01:00
 "Number " 72
 "CalFactor " 1
 "Unit " 0
 "Unit Name " "(MASS)ug/m3"
 "SIZE_CORRECT" "DISABLED"
 "TEMPUNITS " F
 "Max MASS " 3.141058
 "Max MASS @ " 1
 "Avg MASS " 2.358987
 "Max Diam " 0.479832
 "Max Diam @ " 13
 "Avg Diam " 0.42793
 "ALARM " "ENABLED"
 "ALARM_LEVEL " 2500
 "AUTO_ZERO " "DISABLED"
 "AZ INTERVAL " 1
 "Errors " 0

record	(MASS)ug/m3	Temp	RHumidity	Diameter
64	2.4	65.7	52	0.4136
65	1.9	65.7	52	0.398
66	2.2	65.8	52	0.4156
67	2.9	65.8	52	0.4427
68	2.4	65.8	52	0.4315
69	2.7	65.8	52	0.4431
70	2.3	65.9	52	0.4263
71	2.6	65.9	52	0.4403
72	2	65.9	52	0.4143

===== PuTTY log 2016.06.13 21:26:53 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      3
"Start Time  "      10:44:32
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      132
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.42159
"Max MASS @ "      1
"Avg MASS   "      3.059834
"Max Diam  "      2.645381
"Max Diam @ "      115
"Avg Diam  "      0.560011
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	15.4	66.6	51	0.8621
2	2.2	66.7	51	0.4666
3	2.5	66.7	52	0.4834
4	2.8	66.7	52	0.5246
5	2.2	66.8	52	0.4573
6	3.2	66.8	52	0.5097
7	2.7	66.9	52	0.4717
8	2.7	66.9	52	0.4708
9	2.1	67	52	0.4514
10	3.1	67	52	0.5024
11	2.3	67.1	52	0.4517
12	2.2	67.1	52	0.447
13	1.7	67.2	51	0.4174
14	2.5	67.2	51	0.4541
15	2.7	67.3	51	0.4512
16	2.3	67.3	51	0.4322
17	2.8	67.4	51	0.4516
18	2.5	67.4	51	0.4408
19	2.3	67.5	51	0.4334
20	2.6	67.5	51	0.4432
21	2.8	67.5	51	0.4874
22	2.8	67.6	51	0.4877
23	2.9	67.7	51	0.4801
24	2.7	67.8	51	0.4887
25	2	67.8	51	0.4511
26	2	67.9	51	0.4474
27	2.5	68	51	0.4719
28	3	68	51	0.5031
29	1.9	68.1	51	0.4385
30	2.5	68.1	50	0.4558
31	2.2	68.1	50	0.4501
32	2.6	68.2	50	0.468
33	2.4	68.2	50	0.4694
34	2	68.3	50	0.443
35	2.2	68.3	50	0.449
36	2.4	68.4	50	0.4487
37	2.3	68.4	50	0.4301

===== PuTTY log 2016.06.13 21:26:53 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      3
"Start Time  "      10:44:32
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      132
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.42159
"Max MASS @ "      1
"Avg MASS   "      3.059834
"Max Diam  "      2.645381
"Max Diam @ "      115
"Avg Diam  "      0.560011
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	3	68.4	50	0.4388
39	2.7	68.5	50	0.4208
40	2.3	68.5	50	0.4054
41	2.5	68.5	50	0.4158
42	2.3	68.6	50	0.4019
43	1.9	68.7	50	0.3913
44	2.3	68.7	50	0.4002
45	2.4	68.7	50	0.3973
46	2.4	68.8	50	0.4068
47	2.5	68.9	50	0.4128
48	2.4	68.9	50	0.4117
49	2.3	68.9	50	0.4095
50	2.8	69	50	0.4335
51	2.1	69	50	0.4113
52	2.1	69.1	50	0.411
53	1.9	69.1	49	0.405
54	2.5	69.1	49	0.4289
55	2	69.2	49	0.4196
56	2.3	69.2	49	0.4285
57	2.3	69.2	49	0.4192
58	3.2	69.3	49	0.4603
59	2.4	69.3	49	0.4207
60	2.2	69.4	49	0.4147
61	2.4	69.4	49	0.4275
62	2.4	69.4	49	0.4194
63	2.3	69.4	49	0.4105
64	2.6	69.4	49	0.4032
65	2.4	69.5	49	0.3983
66	2.1	69.5	48	0.3957
67	1.5	69.5	48	0.3826
68	1.9	69.6	48	0.3913
69	1.8	69.7	48	0.389
70	2.2	69.7	48	0.402
71	1.6	69.7	48	0.3814
72	2.3	69.8	48	0.4019
73	2	69.8	48	0.3923
74	2	69.8	48	0.3933

===== PuTTY log 2016.06.13 21:26:53 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      3
"Start Time  "      10:44:32
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      132
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.42159
"Max MASS @ "      1
"Avg MASS   "      3.059834
"Max Diam  "      2.645381
"Max Diam @ "      115
"Avg Diam  "      0.560011
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	2.6	69.8	48	0.4114
76	8.3	69.8	48	2.4366
77	4.3	69.9	48	0.9313
78	3.8	69.9	48	0.6479
79	4.3	69.9	47	0.6935
80	4.4	70	47	0.646
81	3.7	70	47	0.6305
82	3.9	70	47	0.718
83	4.6	70	47	0.7493
84	3.5	70	47	0.5889
85	4.4	70	47	0.6291
86	4.3	70.1	47	0.5928
87	3.7	70.1	47	0.5316
88	3.8	70.1	47	0.581
89	3.7	70.1	47	0.543
90	3.6	70.1	47	0.5465
91	3.9	70.2	47	0.7548
92	3.8	70.2	47	0.615
93	3.9	70.3	47	0.5633
94	3.8	70.2	47	0.8828
95	3.4	70.3	47	0.6013
96	3.4	70.3	47	0.5811
97	4.1	70.4	47	0.6357
98	3.8	70.4	47	0.606
99	3.6	70.4	47	0.7311
100	3.5	70.4	47	0.6593
101	2.6	70.4	47	0.5241
102	2.8	70.5	47	0.5298
103	2.8	70.5	47	0.5233
104	3.6	70.6	47	0.6105
105	3	70.6	47	0.6146
106	2.9	70.6	46	0.5567
107	3.7	70.7	46	0.5912
108	3.2	70.7	46	0.5971
109	3.6	70.7	46	0.7924
110	3.2	70.8	46	0.7729
111	3.4	70.8	46	0.5917

===== PuTTY log 2016.06.13 21:26:53 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330   "
"Device no.  "      55
"Tag Number  "      3
"Start Time  "      10:44:32
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      132
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.42159
"Max MASS @ "      1
"Avg MASS   "      3.059834
"Max Diam  "      2.645381
"Max Diam @ "      115
"Avg Diam   "      0.560011
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	2.8	70.8	46	0.4822
113	3.4	70.8	46	0.5367
114	3.3	70.8	46	0.5096
115	9.9	70.8	46	2.6454
116	5.5	70.9	46	1.8506
117	4.9	70.8	46	0.7851
118	5.2	70.9	46	1.3099
119	3.8	70.9	46	0.672
120	3.6	70.9	46	0.631
121	2.8	70.9	46	0.5868
122	3.7	70.9	46	0.7926
123	2.8	70.9	45	0.6409
124	2.8	71	46	0.547
125	3	71	46	0.596
126	2.7	71	45	0.5183
127	3.5	71	45	0.5732
128	2.2	71.1	46	0.4788
129	2.6	71.1	45	0.4895
130	2.6	71.1	46	0.4632
131	2.3	71.1	45	0.4536
132	3	71.2	46	0.5008

===== PuTTY log 2016.06.13 21:28:06 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      4
"Start Time  "      13:32:35
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      124
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.10312
"Max MASS @ "      110
"Avg MASS   "      2.836743
"Max Diam  "      1.040295
"Max Diam @ "      108
"Avg Diam  "      0.543647
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors     "      0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	2.8	72.7	46	0.3567
2	2.5	72.7	45	0.3641
3	3.4	72.8	45	0.3894
4	3.4	72.8	45	0.4225
5	3.1	72.9	44	0.424
6	3.3	72.9	44	0.5325
7	2.9	73	44	0.6113
8	3.4	73.1	44	0.5639
9	3.4	73.2	44	0.5161
10	2.7	73.3	44	0.475
11	2.2	73.4	44	0.437
12	2.7	73.4	43	0.427
13	2.6	73.5	43	0.423
14	3	73.6	43	0.432
15	2.9	73.6	43	0.4411
16	2.3	73.7	43	0.4169
17	2.4	73.8	42	0.4181
18	2.6	73.8	42	0.4215
19	2.4	73.9	42	0.4242
20	2.6	73.9	42	0.4338
21	2.5	74	42	0.4842
22	2.8	74.1	42	0.6175
23	2.5	74.2	42	0.634
24	3.2	74.2	41	0.5836
25	2.5	74.3	41	0.4919
26	3.1	74.3	41	0.494
27	2.9	74.4	41	0.4934
28	2.8	74.4	41	0.4996
29	2.3	74.5	41	0.4812
30	1.9	74.5	41	0.4388
31	3	74.6	41	0.507
32	2.8	74.6	41	0.7656
33	2.8	74.7	40	0.6376
34	2.8	74.7	40	0.6388
35	3.5	74.8	40	0.7087
36	2.7	74.9	40	0.5273
37	2.8	74.9	40	0.5443

===== PuTTY log 2016.06.13 21:28:06 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      4
"Start Time  "      13:32:35
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      124
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.10312
"Max MASS @ "      110
"Avg MASS   "      2.836743
"Max Diam  "      1.040295
"Max Diam @ "      108
"Avg Diam  "      0.543647
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	2.2	75	40	0.47
39	2.7	75.1	40	0.5146
40	2.9	75.1	40	0.6785
41	2.6	75.2	40	0.67
42	2.9	75.3	39	0.7415
43	2.4	75.3	39	0.5721
44	2	75.3	39	0.5082
45	2.9	75.3	39	0.6211
46	2.8	75.4	39	0.5949
47	3.3	75.4	39	0.5593
48	2.3	75.4	39	0.4522
49	2.4	75.4	39	0.4593
50	2.3	75.5	39	0.4393
51	2.3	75.5	39	0.4498
52	2.5	75.5	39	0.4952
53	2	75.5	39	0.4736
54	3.1	75.5	38	0.5978
55	2.2	75.6	38	0.4952
56	3	75.6	38	0.5073
57	2	75.6	38	0.4529
58	2.5	75.6	38	0.4762
59	2	75.6	38	0.4471
60	2.1	75.6	38	0.4492
61	2.7	75.6	38	0.4565
62	2.1	75.6	38	0.4183
63	2.8	75.7	38	0.4375
64	2.6	75.7	38	0.453
65	2.9	75.7	38	0.5331
66	2.8	75.8	38	0.8759
67	2.7	75.8	38	0.6499
68	2.9	75.8	38	0.5943
69	2.4	75.9	38	0.5434
70	2.2	75.9	38	0.5477
71	3	75.9	38	0.5487
72	2.9	75.9	38	0.5027
73	2.1	76	38	0.4475
74	2.9	76	37	0.4808

===== PuTTY log 2016.06.13 21:28:06 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      4
"Start Time  "      13:32:35
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      124
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.10312
"Max MASS @ "      110
"Avg MASS   "      2.836743
"Max Diam  "      1.040295
"Max Diam @ "      108
"Avg Diam  "      0.543647
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0

```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	3.7	76	38	0.8984
76	2.8	76.1	37	0.602
77	3.1	76.1	38	0.6861
78	3.5	76.2	37	0.6473
79	2.5	76.2	37	0.5301
80	2.8	76.2	37	0.5368
81	2.8	76.3	37	0.532
82	3.7	76.3	37	0.627
83	3.1	76.3	37	0.6683
84	3.7	76.3	37	0.6818
85	3.8	76.3	37	0.6414
86	2.2	76.4	37	0.4583
87	3.6	76.4	37	0.5567
88	2.3	76.4	37	0.4512
89	2.4	76.4	37	0.451
90	2.4	76.5	37	0.4537
91	2.2	76.5	37	0.4432
92	2.5	76.5	37	0.4551
93	2.8	76.6	37	0.4701
94	2.7	76.6	37	0.5812
95	3.2	76.6	36	0.6014
96	3.1	76.6	36	0.5131
97	3.2	76.6	36	0.4964
98	3.1	76.6	36	0.5005
99	3.7	76.7	36	0.6186
100	3.3	76.7	36	0.6733
101	3.7	76.7	36	0.7455
102	3.5	76.7	36	0.6276
103	3.3	76.7	36	0.5759
104	3.6	76.7	36	0.6374
105	3.1	76.7	36	0.5191
106	2.6	76.8	36	0.5831
107	2.9	76.7	36	0.8223
108	3.5	76.7	36	1.0403
109	3.4	76.7	36	0.6004
110	4.1	76.8	36	0.933
111	3.5	76.8	36	0.7824

===== PuTTY log 2016.06.13 21:28:06 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      4
"Start Time  "      13:32:35
"Start Date  "      09-Jun-2016
"Log Period  "      00:01:00
"Number     "      124
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.10312
"Max MASS @ "      110
"Avg MASS   "      2.836743
"Max Diam  "      1.040295
"Max Diam @ "      108
"Avg Diam  "      0.543647
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	2.6	76.9	36	0.4949
113	2.8	76.9	36	0.5014
114	3	76.9	36	0.5435
115	2.6	77	36	0.4974
116	2.2	77	36	0.4773
117	3.7	77	36	0.5738
118	3.6	77.1	36	0.5768
119	2.7	77.1	36	0.5045
120	3.3	77.1	35	0.5163
121	2.7	77.2	35	0.5165
122	2.9	77.2	35	0.528
123	3.2	77.2	36	0.4804
124	3.1	77.3	35	0.4671


```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      5
"Start Time  "      08:18:04
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      127
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      8.626417
"Max MASS @ "      64
"Avg MASS   "      2.393856
"Max Diam  "      1.217322
"Max Diam @ "      98
"Avg Diam  "      0.477587
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	4	67.4	41	0.3604
2	3.2	67.4	41	0.4074
3	4.1	67.4	41	0.5748
4	1.6	67.4	41	0.4636
5	2.1	67.3	41	0.5055
6	2.1	67.3	41	0.504
7	2	67.3	41	0.494
8	2.5	67.3	41	0.5488
9	2.4	67.2	41	0.4846
10	1.9	67.2	41	0.4408
11	3.3	67.2	41	0.5191
12	2.1	67.2	41	0.4324
13	1.9	67.1	41	0.4116
14	2.2	67.1	41	0.4278
15	2.5	67.1	41	0.4503
16	2.5	67.1	41	0.5827
17	1.9	67	41	0.4733
18	1.9	67	42	0.4747
19	2.2	67	42	0.4961
20	2.3	67	42	0.6769
21	2.3	66.9	42	0.6097
22	2.9	66.9	42	0.5395
23	2.2	66.9	42	0.4492
24	2.7	66.9	42	0.4761
25	2	66.8	42	0.4288
26	2.2	66.8	42	0.437
27	2.8	66.8	42	0.4693
28	1.8	66.8	42	0.4155
29	2.7	66.8	42	0.4526
30	2.6	66.7	42	0.4257
31	1.8	66.7	42	0.3915
32	2.1	66.7	42	0.3897
33	2	66.7	42	0.3652
34	1.5	66.7	42	0.3727
35	1.5	66.7	42	0.3791
36	3.1	66.7	42	0.4373
37	2	66.7	42	0.4059

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      5
"Start Time  "      08:18:04
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number      "      127
"CalFactor   "      1
"Unit        "      0
"Unit Name   "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS   "      F
"Max MASS    "      8.626417
"Max MASS @  "      64
"Avg MASS    "      2.393856
"Max Diam    "      1.217322
"Max Diam @  "      98
"Avg Diam    "      0.477587
"ALARM       "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO   "      "DISABLED"
"AZ INTERVAL "      1
"errors      "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	2.4	66.7	42	0.4113
39	1.8	66.7	43	0.3926
40	2.2	66.7	43	0.4043
41	2	66.7	43	0.3981
42	1.5	66.7	43	0.3841
43	2	66.7	43	0.3987
44	1.8	66.7	43	0.3911
45	2.2	66.7	43	0.4052
46	2.7	66.7	43	0.4215
47	2.5	66.7	43	0.4251
48	2	66.7	43	0.4067
49	2.1	66.7	43	0.4155
50	2.3	66.7	43	0.4341
51	2.2	66.6	43	0.4297
52	2.4	66.7	43	0.4335
53	1.8	66.7	43	0.4005
54	2.6	66.6	43	0.4489
55	2.1	66.6	43	0.4073
56	2.3	66.6	43	0.4146
57	3.4	66.6	43	0.5927
58	2.5	66.6	43	0.5381
59	3.6	66.6	43	0.5383
60	2.6	66.6	43	0.5343
61	2.3	66.6	43	0.496
62	2	66.6	43	0.4675
63	2.1	66.6	43	0.4763
64	8.6	66.6	43	0.4315
65	2.2	66.6	44	0.3624
66	2	66.6	44	0.3608
67	1.8	66.6	44	0.3591
68	1.8	66.6	44	0.3591
69	1.9	66.6	44	0.3607
70	2	66.6	44	0.362
71	2.6	66.6	44	0.4031
72	2.2	66.6	44	0.4016
73	2.1	66.7	44	0.3999
74	3.1	66.7	44	0.4251

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      5
"Start Time  "      08:18:04
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      127
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      8.626417
"Max MASS @ "      64
"Avg MASS   "      2.393856
"Max Diam  "      1.217322
"Max Diam @ "      98
"Avg Diam  "      0.477587
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	2.5	66.7	44	0.4281
76	2.1	66.7	44	0.41
77	2.1	66.7	44	0.4136
78	2.6	66.8	44	0.4218
79	2.4	66.7	44	0.4086
80	2.4	66.8	44	0.4196
81	2.4	66.7	45	0.4195
82	6.5	66.8	45	1.0162
83	1.6	66.8	45	0.4665
84	4.1	66.8	45	1.1531
85	2.7	66.8	45	0.6768
86	1.5	66.8	45	0.4433
87	2.7	66.8	45	0.6084
88	2.5	66.8	45	0.5269
89	2.1	66.9	45	0.4815
90	2.9	66.9	45	0.5281
91	2.5	66.9	45	0.5245
92	3	66.9	45	0.5444
93	2.1	66.9	45	0.4498
94	2.8	66.9	45	0.4784
95	2	66.9	45	0.4239
96	1.8	67	45	0.4179
97	3.1	66.9	45	0.5414
98	5.4	66.9	45	1.2173
99	2.6	67	45	0.5568
100	2.7	67	45	0.4919
101	1.2	67	45	0.385
102	1	67	45	0.3789
103	1.5	67	45	0.4
104	1.9	67	45	0.4165
105	1.9	67.1	45	0.4163
106	2.1	67.1	45	0.4066
107	5.7	67.1	45	0.7986
108	1.6	67.1	44	0.4612
109	2.7	67.1	44	0.5755
110	2.2	67.1	44	0.5238
111	1.5	67.1	44	0.4495

===== PuTTY log 2016.06.13 21:31:06 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      5
"Start Time  "      08:18:04
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      127
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      8.626417
"Max MASS @ "      64
"Avg MASS   "      2.393856
"Max Diam  "      1.217322
"Max Diam @ "      98
"Avg Diam  "      0.477587
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	2.2	67.1	44	0.462
113	3	67.1	44	0.5873
114	2.1	67.1	44	0.5845
115	4	67.1	44	1.1171
116	1.9	67.2	44	0.5033
117	1.6	67.2	44	0.4313
118	2	67.2	44	0.452
119	1.5	67.2	44	0.4215
120	1.8	67.2	44	0.443
121	1.4	67.3	44	0.4195
122	1.7	67.3	44	0.4338
123	1.7	67.3	44	0.4333
124	2	67.3	44	0.4558
125	1.5	67.3	44	0.425
126	2.1	67.3	44	0.4595
127	2.4	67.3	44	0.4794

===== PuTTY log 2016.06.13 21:33:16 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      6
"Start Time  "      11:07:31
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      128
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.82401
"Max MASS @ "      1
"Avg MASS   "      2.993884
"Max Diam  "      1.405458
"Max Diam @ "      102
"Avg Diam  "      0.55747
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      1000
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	15.8	68.4	44	0.731
2	4.1	68.5	44	0.797
3	5.3	68.5	44	0.6192
4	3	68.7	44	0.4473
5	2.7	68.7	44	0.4811
6	3	68.8	45	0.5124
7	3.5	68.9	44	0.5358
8	3.1	68.9	45	0.5781
9	2.3	69	45	0.5459
10	3.3	69	44	0.5885
11	3.7	69.1	44	0.9354
12	3.2	69.1	44	0.9166
13	3.4	69.2	44	0.682
14	2.5	69.3	44	0.5117
15	3.6	69.3	44	0.5291
16	2.9	69.4	44	0.4962
17	4	69.5	44	0.8101
18	2.6	69.6	44	0.5165
19	2.7	69.7	44	0.4996
20	2.7	69.7	44	0.4653
21	2.3	69.8	43	0.4567
22	2.8	69.9	43	0.4756
23	2.6	69.9	43	0.4679
24	3.2	70	43	0.4902
25	3.3	70	43	0.5072
26	3.2	70.1	43	0.5099
27	2.4	70.2	44	0.4822
28	2.9	70.2	43	0.5685
29	2.5	70.3	44	0.4929
30	3.4	70.4	43	0.553
31	2.2	70.4	44	0.4796
32	3.4	70.5	44	0.6696
33	2.2	70.6	44	0.4336
34	2.6	70.6	44	0.5254
35	2.9	70.7	44	0.583
36	3.7	70.7	44	0.6353
37	2.9	70.8	44	0.4961

===== PuTTY log 2016.06.13 21:33:16 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      6
"Start Time  "      11:07:31
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      128
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.82401
"Max MASS @ "      1
"Avg MASS   "      2.993884
"Max Diam  "      1.405458
"Max Diam @ "      102
"Avg Diam  "      0.55747
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      1000

```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	2.4	70.8	44	0.4688
39	2.7	70.9	44	0.4754
40	2.6	70.9	44	0.4976
41	2.7	71	44	0.5135
42	2.9	71	44	0.4966
43	2.6	71	44	0.4883
44	2.7	71.1	44	0.4869
45	1.9	71.1	43	0.439
46	2.7	71.2	43	0.478
47	3.2	71.2	43	0.5336
48	2.8	71.3	43	0.6063
49	2.7	71.4	44	0.5923
50	3	71.4	44	0.5062
51	2	71.5	43	0.4242
52	2.8	71.5	43	0.4384
53	3.3	71.6	43	0.5446
54	2.9	71.6	44	0.5362
55	3.6	71.6	44	0.872
56	2.9	71.7	44	0.5969
57	2.8	71.7	44	0.5057
58	2.8	71.8	44	0.4672
59	2.8	71.8	44	0.4659
60	2.8	71.9	44	0.5749
61	3	71.9	44	0.7369
62	3.1	72	44	0.6044
63	3.5	72.1	44	0.5537
64	3.1	72.1	44	0.5014
65	2.8	72.2	44	0.4542
66	2.8	72.3	44	0.461
67	3.5	72.3	44	0.4411
68	3.1	72.4	44	0.4056
69	2.8	72.5	43	0.4125
70	2.5	72.6	43	0.4399
71	2.6	72.6	44	0.4368
72	2.9	72.7	43	0.5167
73	2.6	72.7	43	0.4671
74	2.5	72.8	43	0.4421

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      6
"Start Time  "      11:07:31
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      128
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.82401
"Max MASS @ "      1
"Avg MASS   "      2.993884
"Max Diam  "      1.405458
"Max Diam @ "      102
"Avg Diam  "      0.55747
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      1000
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	1.8	72.9	43	0.3765
76	3.5	72.9	43	0.7037
77	2.8	73	43	0.6326
78	2.7	73	42	0.5235
79	2.6	73.1	42	0.521
80	3.6	73.2	43	0.7114
81	2.6	73.2	42	0.552
82	2.4	73.3	43	0.5926
83	3.5	73.4	43	0.7867
84	3	73.4	43	0.6132
85	2.8	73.5	43	0.6418
86	3.1	73.5	42	0.5115
87	2.6	73.6	42	0.4533
88	3.3	73.7	43	0.5428
89	3.1	73.7	42	0.561
90	3	73.8	42	0.5
91	2.4	73.8	42	0.4594
92	2.6	73.9	42	0.4521
93	2.6	73.9	42	0.4692
94	2.8	73.9	43	0.4823
95	2.7	74	43	0.4797
96	2.6	74.1	42	0.5042
97	2.8	74.2	42	0.4849
98	2.8	74.2	42	0.4677
99	2.3	74.3	42	0.4388
100	3.4	74.4	42	0.4828
101	2.5	74.4	42	0.6721
102	3.9	74.5	42	1.4055
103	3.3	74.5	42	0.8167
104	3.7	74.5	42	0.7021
105	2.9	74.6	42	0.6413
106	2.5	74.7	42	0.6329
107	3.4	74.7	41	1.053
108	2.1	74.8	41	0.5349
109	3.1	74.8	42	0.6384
110	3	74.9	42	0.5825
111	2.5	75	41	0.4811

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      6
"Start Time  "      11:07:31
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      128
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      15.82401
"Max MASS @ "      1
"Avg MASS   "      2.993884
"Max Diam  "      1.405458
"Max Diam @ "      102
"Avg Diam  "      0.55747
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      1000
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	1.4	75	42	0.4095
113	2	75.1	42	0.4361
114	3	75.1	41	0.564
115	1.9	75.2	41	0.454
116	3.5	75.2	41	0.5805
117	3.3	75.2	41	0.5869
118	3.1	75.3	41	0.5669
119	2.4	75.4	41	0.4982
120	3.6	75.4	41	0.6597
121	2.9	75.4	41	0.5645
122	2.7	75.5	41	0.6088
123	2.6	75.5	41	0.6252
124	2.5	75.6	41	0.595
125	3	75.6	41	0.5588
126	2	75.7	41	0.4177
127	2.3	75.7	41	0.4547
128	3.8	75.8	41	0.7632


```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      7
"Start Time  "      14:50:59
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      40
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      31.96362
"Max MASS @ "      1
"Avg MASS   "      3.792159
"Max Diam  "      3.023228
"Max Diam @ "      1
"Avg Diam  "      0.669126
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      1000
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	32	78.9	40	3.0232
2	25.1	78.9	39	2.8783
3	4.4	79	39	1.6851
4	2.6	79	39	0.5666
5	2.3	79	38	0.5192
6	2.3	79	38	0.4611
7	2.6	79	38	0.4897
8	3	79	38	0.5245
9	2.7	79.1	38	0.5604
10	5	79.1	38	0.8927
11	1.2	79.1	37	0.4038
12	1.5	79.2	37	0.4114
13	1.7	79.1	37	0.4116
14	2.4	79.2	37	0.4616
15	2.1	79.2	37	0.4606
16	1.9	79.2	37	0.437
17	2.6	79.2	37	0.5176
18	2.4	79.2	37	0.4983
19	1.4	79.2	36	0.4035
20	1.6	79.2	36	0.4216
21	3	79.2	36	0.5504
22	2	79.3	36	0.4111
23	2.1	79.2	36	0.3993
24	1.2	79.3	36	0.3691
25	1.8	79.3	36	0.347
26	2.3	79.3	36	0.3435
27	2	79.3	36	0.3564
28	1.9	79.3	36	0.3568
29	1.7	79.3	36	0.3552
30	2.1	79.2	35	0.3677
31	2.4	79.3	35	0.4631
32	2.8	79.2	36	0.6463
33	2.5	79.2	36	0.5661
34	2.1	79.2	36	0.566
35	2.9	79.2	36	0.7786
36	7.1	79.2	36	1.8284
37	2.5	79.2	36	0.5382

===== PuTTY log 2016.06.13 21:40:44 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      7
"Start Time  "      14:50:59
"Start Date  "      10-Jun-2016
"Log Period  "      00:01:00
"Number     "      40
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      31.96362
"Max MASS @ "      1
"Avg MASS   "      3.792159
"Max Diam   "      3.023228
"Max Diam @ "      1
"Avg Diam   "      0.669126
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      1000

```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	2.2	79.2	36	0.4814
39	1.5	79.1	36	0.4602
40	4.6	79.1	36	0.5524

===== PuTTY log 2016.06.13 21:42:18 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      8
"Start Time  "      08:24:24
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      121
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337484
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	75.4	47	0.3368
2	0	75.5	51	0.3375
3	0	75.7	54	0.3375
4	0	75.9	55	0.3375
5	0	76.1	56	0.3375
6	0	76.3	57	0.3375
7	0	76.4	58	0.3375
8	0	76.6	59	0.3375
9	0	76.8	59	0.3375
10	0	77	59	0.3375
11	0	77.1	60	0.3375
12	0	77.2	60	0.3375
13	0	77.3	60	0.3375
14	0	77.5	60	0.3375
15	0	77.6	61	0.3375
16	0	77.7	61	0.3375
17	0	77.9	61	0.3375
18	0	78	61	0.3375
19	0	78.1	61	0.3375
20	0	78.2	61	0.3375
21	0	78.2	61	0.3375
22	0	78.3	61	0.3375
23	0	78.4	61	0.3375
24	0	78.5	61	0.3375
25	0	78.6	61	0.3375
26	0	78.7	61	0.3375
27	0	78.8	61	0.3375
28	0	78.8	61	0.3375
29	0	78.9	61	0.3375
30	0	79	61	0.3375
31	0	79	61	0.3375
32	0	79.1	61	0.3375
33	0	79.1	61	0.3375
34	0	79.2	61	0.3375
35	0	79.3	61	0.3375
36	0	79.3	61	0.3375
37	0	79.4	61	0.3375

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      8
"Start Time  "      08:24:24
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      121
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337484
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	79.4	61	0.3375
39	0	79.5	61	0.3375
40	0	79.6	61	0.3375
41	0	79.6	61	0.3375
42	0	79.7	61	0.3375
43	0	79.8	60	0.3375
44	0	79.8	60	0.3375
45	0	79.9	60	0.3375
46	0	79.9	60	0.3375
47	0	79.9	60	0.3375
48	0	80	60	0.3375
49	0	80	59	0.3375
50	0	80.1	60	0.3375
51	0	80.1	59	0.3375
52	0	80.1	59	0.3375
53	0	80.2	59	0.3375
54	0	80.2	59	0.3375
55	0	80.3	59	0.3375
56	0	80.3	59	0.3375
57	0	80.4	59	0.3375
58	0	80.5	59	0.3375
59	0	80.6	59	0.3375
60	0	80.6	59	0.3375
61	0	80.6	59	0.3375
62	0	80.6	59	0.3375
63	0	80.7	59	0.3375
64	0	80.7	59	0.3375
65	0	80.8	59	0.3375
66	0	80.8	59	0.3375
67	0	80.9	59	0.3375
68	0	80.9	59	0.3375
69	0	80.9	59	0.3375
70	0	80.9	59	0.3375
71	0	81	59	0.3375
72	0	81	59	0.3375
73	0	81.1	59	0.3375
74	0	81.1	59	0.3375

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      8
"Start Time  "      08:24:24
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      121
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337484
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	0	81.2	58	0.3375
76	0	81.3	58	0.3375
77	0	81.3	58	0.3375
78	0	81.4	58	0.3375
79	0	81.4	58	0.3375
80	0	81.5	58	0.3375
81	0	81.6	58	0.3375
82	0	81.6	58	0.3375
83	0	81.7	58	0.3375
84	0	81.8	58	0.3375
85	0	81.9	57	0.3375
86	0	82	57	0.3375
87	0	82.1	57	0.3375
88	0	82.2	57	0.3375
89	0	82.4	57	0.3375
90	0	82.5	56	0.3375
91	0	82.6	56	0.3375
92	0	82.7	56	0.3375
93	0	82.9	56	0.3375
94	0	83	55	0.3375
95	0	83.2	55	0.3375
96	0	83.4	55	0.3375
97	0	83.5	55	0.3375
98	0	83.7	54	0.3375
99	0	83.8	54	0.3375
100	0	84	53	0.3375
101	0	84.2	53	0.3375
102	0	84.3	53	0.3375
103	0	84.5	53	0.3375
104	0	84.6	52	0.3375
105	0	84.8	52	0.3375
106	0	85	51	0.3375
107	0	85.2	51	0.3375
108	0	85.3	51	0.3375
109	0	85.5	50	0.3375
110	0	85.7	50	0.3375
111	0	85.9	49	0.3375

===== PuTTY log 2016.06.13 21:42:18 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      8
"Start Time  "      08:24:24
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      121
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337484
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	0	86	49	0.3375
113	0	86.2	49	0.3375
114	0	86.3	48	0.3375
115	0	86.5	48	0.3375
116	0	86.6	48	0.3375
117	0	86.9	47	0.3375
118	0	87	47	0.3375
119	0	87.1	47	0.3375
120	0	87.3	47	0.3375
121	0	87.4	47	0.3375

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      9
"Start Time  "      11:20:21
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      27
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.33745
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	90.7	46	0.3364
2	0	90.7	44	0.3375
3	0	90.7	43	0.3375
4	0	90.6	42	0.3375
5	0	90.5	41	0.3375
6	0	90.5	41	0.3375
7	0	90.5	41	0.3375
8	0	90.4	41	0.3375
9	0	90.4	41	0.3375
10	0	90.3	40	0.3375
11	0	90.3	40	0.3375
12	0	90.2	40	0.3375
13	0	90.1	40	0.3375
14	0	90.1	40	0.3375
15	0	90.1	41	0.3375
16	0	90	40	0.3375
17	0	90	40	0.3375
18	0	90	40	0.3375
19	0	90	40	0.3375
20	0	90	40	0.3375
21	0	89.9	40	0.3375
22	0	89.9	40	0.3375
23	0	89.8	40	0.3375
24	0	89.9	40	0.3375
25	0	89.8	40	0.3375
26	0	89.8	39	0.3375
27	0	89.8	40	0.3375

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      10
"Start Time  "      12:03:59
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      42
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337464
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	89.4	40	0.3364
2	0	89.3	40	0.3375
3	0	89.4	40	0.3375
4	0	89.4	40	0.3375
5	0	89.4	40	0.3375
6	0	89.4	40	0.3375
7	0	89.5	40	0.3375
8	0	89.5	40	0.3375
9	0	89.5	40	0.3375
10	0	89.5	40	0.3375
11	0	89.5	40	0.3375
12	0	89.5	40	0.3375
13	0	89.6	40	0.3375
14	0	89.6	40	0.3375
15	0	89.6	40	0.3375
16	0	89.6	40	0.3375
17	0	89.6	40	0.3375
18	0	89.6	40	0.3375
19	0	89.6	40	0.3375
20	0	89.6	40	0.3375
21	0	89.6	40	0.3375
22	0	89.6	40	0.3375
23	0	89.7	40	0.3375
24	0	89.6	40	0.3375
25	0	89.6	40	0.3375
26	0	89.7	40	0.3375
27	0	89.7	40	0.3375
28	0	89.7	40	0.3375
29	0	89.7	40	0.3375
30	0	89.7	40	0.3375
31	0	89.7	40	0.3375
32	0	89.7	40	0.3375
33	0	89.7	40	0.3375
34	0	89.8	40	0.3375
35	0	89.8	39	0.3375
36	0	89.8	40	0.3375
37	0	89.8	40	0.3375

===== PuTTY log 2016.06.13 21:43:46 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      10
"Start Time  "      12:03:59
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      42
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337464
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	89.7	39	0.3375
39	0	89.8	39	0.3375
40	0	89.8	39	0.3375
41	0	89.8	39	0.3375
42	0	89.8	39	0.3375

===== PuTTY log 2016.06.13 21:46:36 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      11
"Start Time  "      13:38:00
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      55
"CalFactor  "      1
"Unit       "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"     "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0.206997
"Max MASS @ "      1
"Avg MASS   "      0.003764
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337421
"ALARM     "      "ENABLED"
"ALARM_LEVEL "     2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "     1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0.2	90.6	39	0.3337
2	0	90.6	39	0.3375
3	0	90.6	39	0.3375
4	0	90.7	38	0.3375
5	0	90.7	38	0.3375
6	0	90.8	38	0.3375
7	0	90.8	37	0.3375
8	0	90.9	37	0.3375
9	0	91	37	0.3375
10	0	91	37	0.3375
11	0	91.1	37	0.3375
12	0	91.1	37	0.3375
13	0	91.2	37	0.3375
14	0	91.3	37	0.3375
15	0	91.4	36	0.3375
16	0	91.4	36	0.3375
17	0	91.4	36	0.3375
18	0	91.5	36	0.3375
19	0	91.5	36	0.3375
20	0	91.5	36	0.3375
21	0	91.6	35	0.3375

===== PuTTY log 2016.06.13 21:46:36 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      11
"Start Time  "      13:38:00
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      55
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"      "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0.206997
"Max MASS @ "      1
"Avg MASS   "      0.003764
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337421
"ALARM     "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
22	0	91.7	35	0.3375
23	0	91.7	35	0.3375
24	0	91.7	35	0.3375
25	0	91.7	35	0.3375
26	0	91.8	35	0.3375
27	0	91.8	35	0.3375
28	0	91.8	35	0.3375
29	0	91.9	35	0.3375
30	0	91.8	34	0.3375
31	0	91.9	34	0.3375
32	0	91.9	34	0.3375
33	0	91.9	34	0.3375
34	0	92	34	0.3375
35	0	92.1	34	0.3375
36	0	92.1	34	0.3375
37	0	92.2	33	0.3375
38	0	92.2	33	0.3375
39	0	92.2	33	0.3375
40	0	92.3	33	0.3375
41	0	92.3	33	0.3375
42	0	92.3	33	0.3375

===== PuTTY log 2016.06.13 21:46:36 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      11
"Start Time  "      13:38:00
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      55
"CalFactor  "      1
"Unit       "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"      "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0.206997
"Max MASS @ "      1
"Avg MASS   "      0.003764
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337421
"ALARM      "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"errors     "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
43	0	92.3	33	0.3375
44	0	92.4	33	0.3375
45	0	92.4	33	0.3375
46	0	92.4	33	0.3375
47	0	92.4	33	0.3375
48	0	92.5	33	0.3375
49	0	92.5	33	0.3375
50	0	92.5	33	0.3375
51	0	92.5	33	0.3375
52	0	92.5	33	0.3375
53	0	92.5	33	0.3375
54	0	92.5	33	0.3375
55	0	92.5	32	0.3375

===== PuTTY log 2016.06.13 21:47:52 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      12
"Start Time  "      15:05:42
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      66
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"      "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337479
"ALARM     "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	91.9	33	0.3368
2	0	91.8	33	0.3375
3	0	91.8	33	0.3375
4	0	91.7	33	0.3375
5	0	91.7	32	0.3375
6	0	91.7	33	0.3375
7	0	91.6	32	0.3375
8	0	91.6	32	0.3375
9	0	91.5	32	0.3375
10	0	91.5	32	0.3375
11	0	91.4	32	0.3375
12	0	91.4	32	0.3375
13	0	91.3	32	0.3375
14	0	91.2	32	0.3375
15	0	91.1	32	0.3375
16	0	91	32	0.3375
17	0	91	32	0.3375
18	0	90.9	32	0.3375
19	0	90.8	32	0.3375
20	0	90.6	32	0.3375
21	0	90.6	32	0.3375

===== PuTTY log 2016.06.13 21:47:52 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      12
"Start Time  "      15:05:42
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      66
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"      "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337479
"ALARM     "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
22	0	90.5	32	0.3375
23	0	90.4	32	0.3375
24	0	90.3	32	0.3375
25	0	90.2	32	0.3375
26	0	90	32	0.3375
27	0	90	32	0.3375
28	0	89.8	32	0.3375
29	0	89.7	32	0.3375
30	0	89.6	32	0.3375
31	0	89.5	32	0.3375
32	0	89.4	32	0.3375
33	0	89.2	32	0.3375
34	0	89.1	32	0.3375
35	0	89	32	0.3375
36	0	88.9	33	0.3375
37	0	88.8	33	0.3375
38	0	88.7	33	0.3375
39	0	88.6	33	0.3375
40	0	88.5	33	0.3375
41	0	88.3	33	0.3375
42	0	88.2	33	0.3375

===== PuTTY log 2016.06.13 21:47:52 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      12
"Start Time  "      15:05:42
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      66
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"      "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337479
"ALARM     "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"errors    "      100
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
43	0	88.1	33	0.3375
44	0	88	33	0.3375
45	0	87.9	33	0.3375
46	0	87.8	33	0.3375
47	0	87.7	33	0.3375
48	0	87.5	33	0.3375
49	0	87.4	34	0.3375
50	0	87.3	34	0.3375
51	0	87.2	33	0.3375
52	0	87.1	34	0.3375
53	0	87	34	0.3375
54	0	86.9	34	0.3375
55	0	86.8	34	0.3375
56	0	86.7	34	0.3375
57	0	86.5	34	0.3375
58	0	86.4	34	0.3375
59	0	86.3	34	0.3375
60	0	86.3	34	0.3375
61	0	86.2	34	0.3375
62	0	86.1	34	0.3375
63	0	86	34	0.3375

===== PuTTY log 2016.06.13 21:47:52 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      12
"Start Time  "      15:05:42
"Start Date  "      12-Jun-2016
"Log Period  "      00:01:00
"Number     "      66
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"      "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337479
"ALARM     "      "ENABLED"
"ALARM_LEVEL "      2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"errors    "      100

```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
64	0	85.9	34	0.3375
65	0	85.8	34	0.3375
66	0	85.7	34	0.3375

===== PuTTY log 2016.06.13 21:50:00 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      13
"Start Time  "      08:12:40
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      28
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      2.744706
"Max MASS @ "      1
"Avg MASS   "      1.471777
"Max Diam   "      0.76909
"Max Diam @ "      6
"Avg Diam   "      0.48996
"ALARM     "      "ENABLED"
"ALARM_LEVEL"    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "      1
"Errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	2.7	66.2	39	0.3782
2	1.1	66.2	41	0.3567
3	1.4	66.2	42	0.385
4	1.7	66.3	43	0.4096
5	2.3	66.3	44	0.7407
6	2.4	66.3	45	0.7691
7	1	66.3	45	0.4272
8	1.5	66.3	45	0.4765
9	1.3	66.3	46	0.4604
10	0.7	66.3	47	0.3956
11	1.9	66.3	47	0.5051
12	1.8	66.3	47	0.4467
13	2.4	66.3	48	0.5337
14	1.7	66.4	48	0.5967
15	2.4	66.3	48	0.6961
16	1.5	66.4	48	0.5753
17	0.9	66.4	48	0.4512
18	2.2	66.4	49	0.5994
19	0.9	66.4	49	0.4306
20	1	66.4	49	0.4366
21	1	66.4	49	0.4479
22	1	66.4	49	0.4376
23	1.4	66.4	49	0.4726
24	0.5	66.4	49	0.3754
25	0.9	66.4	49	0.4116
26	0.9	66.4	50	0.4073
27	1.3	66.4	50	0.4434
28	1.3	66.4	50	0.6528

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam  "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	5.7	68.1	48	0.3949
2	0.7	68.2	48	0.3575
3	0.5	68.2	49	0.3549
4	0.6	68.3	49	0.3567
5	0.9	68.4	49	0.3661
6	1.1	68.5	49	0.3708
7	1.3	68.6	49	0.3779
8	0.4	68.8	49	0.3496
9	1	68.8	49	0.37
10	0.8	68.9	49	0.3604
11	0.8	69	49	0.3596
12	0.4	69.1	48	0.3501
13	0.4	69.1	49	0.3498
14	0.4	69.1	49	0.351
15	0.2	69.2	49	0.3446
16	0.4	69.2	49	0.3497
17	0.4	69.3	49	0.35
18	0.8	69.3	48	0.3637
19	0.4	69.3	48	0.3492
20	0.8	69.4	49	0.3614
21	0.7	69.4	48	0.3579
22	0.8	69.4	48	0.3608
23	0.3	69.5	48	0.348
24	0.7	69.5	48	0.3596
25	0.6	69.5	48	0.3564
26	0.8	69.6	48	0.3608
27	1.2	69.7	48	0.375
28	1.1	69.7	48	0.3715
29	1.5	69.8	48	0.3847
30	1.3	69.8	48	0.3786
31	0.9	69.9	48	0.3635
32	0.6	70	48	0.3562
33	1.1	70	48	0.3725
34	1.3	70	48	0.3788
35	0.9	70.1	48	0.3766
36	0.9	70.2	48	0.3799
37	1.3	70.3	48	0.3987

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam  "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0.2	70.4	48	0.3463
39	0.7	70.5	48	0.3817
40	1.7	70.6	48	0.4747
41	1	70.7	48	0.413
42	0.7	70.8	48	0.3845
43	0.9	70.9	48	0.3972
44	0.6	70.9	47	0.3742
45	0.9	71	47	0.4003
46	0.7	71.1	48	0.3813
47	1.3	71.2	47	0.4275
48	0.2	71.3	47	0.3529
49	0.6	71.4	47	0.3761
50	0.8	71.5	47	0.3869
51	1	71.5	47	0.4097
52	1.1	71.6	47	0.4151
53	0.9	71.6	47	0.4007
54	0.8	71.6	47	0.39
55	1	71.7	47	0.4128
56	1.3	71.7	47	0.4515
57	0.5	71.7	46	0.3881
58	0.5	71.7	47	0.3789
59	0.8	71.8	46	0.4059
60	1	71.8	46	0.4275
61	0.7	71.8	46	0.4006
62	0.5	71.8	46	0.3747
63	1	71.8	46	0.4267
64	2.2	71.8	46	0.537
65	0.6	71.8	46	0.3744
66	0.6	71.8	46	0.3768
67	0.1	71.7	46	0.3417
68	0.7	71.7	46	0.3819
69	1.4	71.7	46	0.4338
70	0.1	71.7	46	0.3463
71	0.9	71.6	46	0.3934
72	0.7	71.6	46	0.3817
73	0.9	71.6	46	0.4735
74	0.8	71.6	46	0.411

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam   "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	0.4	71.6	46	0.3699
76	0.2	71.6	46	0.3499
77	0.6	71.6	46	0.3971
78	1.1	71.5	46	0.4403
79	0.5	71.5	46	0.3837
80	0.9	71.5	46	0.4218
81	0.9	71.4	46	0.4651
82	0.2	71.4	46	0.3586
83	0.5	71.4	46	0.3895
84	0.7	71.3	46	0.4192
85	0.6	71.3	46	0.4075
86	0.9	71.3	46	0.4371
87	0.3	71.3	46	0.3594
88	0.6	71.3	46	0.3835
89	1.1	71.3	46	0.4213
90	0.9	71.3	46	0.4044
91	0.9	71.3	46	0.4033
92	0.5	71.2	46	0.3752
93	0.5	71.2	46	0.3738
94	0.6	71.2	46	0.3812
95	0.8	71.2	46	0.398
96	0.2	71.2	46	0.3533
97	1.2	71.2	46	0.428
98	0.9	71.2	46	0.4068
99	0.4	71.2	46	0.3682
100	0.7	71.2	46	0.3895
101	0.5	71.2	46	0.3698
102	0.2	71.2	46	0.354
103	0.7	71.2	47	0.3913
104	0.5	71.3	47	0.3786
105	0.4	71.3	47	0.3636
106	0.2	71.4	47	0.3558
107	0.5	71.4	47	0.3734
108	1	71.4	47	0.4125
109	0.8	71.4	47	0.3996
110	0.2	71.5	47	0.3488
111	0.6	71.5	47	0.3844

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam  "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	0.4	71.5	47	0.3701
113	1.1	71.6	47	0.4237
114	0.8	71.6	47	0.3962
115	1.4	71.6	47	0.4622
116	1.1	71.6	47	0.428
117	1	71.6	47	0.4187
118	1.2	71.6	47	0.4318
119	0.5	71.7	47	0.3795
120	1.6	71.7	47	0.4698
121	0.4	71.7	47	0.3639
122	0.6	71.8	47	0.3754
123	0.3	71.8	47	0.3596
124	0.1	71.8	47	0.3474
125	0.4	71.9	47	0.3672
126	0.9	71.8	47	0.401
127	0.4	71.9	47	0.3625
128	0.9	71.9	47	0.3961
129	0.6	71.9	47	0.3744
130	1.1	71.9	47	0.4124
131	0.2	71.9	47	0.3515
132	0.5	71.9	47	0.3726
133	0.4	71.9	47	0.3629
134	0.8	71.9	47	0.3916
135	0.8	72	47	0.3906
136	1.2	72	47	0.4222
137	0.8	72	47	0.3968
138	1.5	72	48	0.4408
139	1.2	72	48	0.4253
140	1	72.1	48	0.4066
141	0.3	72.1	48	0.3537
142	0.6	72.2	48	0.3761
143	1	72.2	48	0.4073
144	1.7	72.3	47	0.4512
145	0.8	72.4	48	0.3794
146	1.3	72.5	47	0.4088
147	0.9	72.5	47	0.3834
148	0.6	72.5	47	0.3705

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam  "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
149	0.6	72.6	47	0.3712
150	0.2	72.7	47	0.3467
151	1	72.8	47	0.4936
152	0.8	72.8	47	0.4397
153	1.8	72.9	47	0.5687
154	1.5	72.9	47	0.5069
155	1	73	47	0.4521
156	0.8	73	46	0.4182
157	0.9	73.1	46	0.4213
158	1.1	73.2	47	0.4368
159	0.9	73.2	46	0.4071
160	0.7	73.3	46	0.3898
161	1.2	73.4	46	0.415
162	0.6	73.4	46	0.3772
163	0.7	73.5	46	0.3843
164	0.7	73.5	46	0.3822
165	0.5	73.5	46	0.369
166	1.1	73.5	46	0.4093
167	1.1	73.5	46	0.3893
168	1.2	73.6	46	0.3966
169	0.8	73.6	46	0.3772
170	0.9	73.5	45	0.384
171	1.2	73.6	46	0.3965
172	0.9	73.6	45	0.434
173	0.7	73.6	45	0.4181
174	0.8	73.6	45	0.4172
175	0.4	73.6	45	0.3808
176	1.2	73.5	45	0.4605
177	1.2	73.5	45	0.4522
178	0.7	73.6	45	0.3965
179	0.6	73.6	45	0.3923
180	0.5	73.6	45	0.3746
181	0.5	73.6	45	0.3803
182	0.8	73.6	45	0.4052
183	1.1	73.7	45	0.4307
184	0.5	73.6	45	0.3793
185	1.3	73.7	45	0.4431

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam  "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
186	1.1	73.7	45	0.4301
187	0.8	73.7	45	0.4083
188	1.1	73.7	45	0.424
189	0.6	73.8	45	0.3813
190	1.2	73.8	45	0.4284
191	1.3	73.8	45	0.441
192	0.7	73.9	44	0.3845
193	1	73.9	45	0.3841
194	0.6	74	44	0.3684
195	0.8	74	44	0.3756
196	1.1	74	44	0.391
197	0.2	74.1	44	0.3487
198	0.9	74.2	44	0.3789
199	0.5	74.2	44	0.363
200	0.9	74.2	44	0.3832
201	0.2	74.3	44	0.3468
202	0.4	74.3	44	0.3546
203	0.2	74.3	44	0.3483
204	0.3	74.3	44	0.3505
205	0.2	74.3	44	0.3461
206	1.1	74.4	44	0.3803
207	0.5	74.4	44	0.3579
208	1.1	74.4	44	0.3618
209	0.2	74.4	44	0.3397
210	1.1	74.4	44	0.3543
211	0.5	74.4	44	0.3441
212	0.7	74.4	44	0.348
213	0.9	74.4	44	0.351
214	0.9	74.4	44	0.3503
215	1	74.4	44	0.3521
216	0.3	74.4	44	0.3417
217	0.8	74.5	44	0.3491
218	0.2	74.4	44	0.3403
219	0.7	74.4	44	0.3481
220	0.4	74.4	44	0.3429
221	0.4	74.5	44	0.3428
222	0.4	74.5	44	0.3428

===== PuTTY log 2016.06.13 21:51:29 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      14
"Start Time  "      08:58:43
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      246
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      5.69521
"Max MASS @ "      1
"Avg MASS   "      0.777295
"Max Diam  "      0.56873
"Max Diam @ "      153
"Avg Diam  "      0.38442
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
223	0.5	74.5	44	0.3443
224	0.5	74.5	44	0.3443
225	0.4	74.5	44	0.3429
226	1.2	74.5	44	0.3562
227	0.7	74.5	44	0.3476
228	0.5	74.5	44	0.345
229	0.5	74.5	44	0.3449
230	0.5	74.5	44	0.3448
231	0.3	74.5	44	0.3422
232	0.3	74.5	44	0.3427
233	0.6	74.5	44	0.3466
234	0.8	74.5	43	0.3486
235	0.7	74.5	43	0.3482
236	1	74.5	43	0.3522
237	0.4	74.5	44	0.3432
238	0.3	74.5	44	0.3414
239	0.2	74.5	44	0.3404
240	1	74.5	44	0.3519
241	1.3	74.6	44	0.3574
242	0.9	74.6	44	0.3512
243	0.8	74.6	44	0.3495
244	0.8	74.6	44	0.3495
245	1	74.6	44	0.3518
246	1	74.7	44	0.3523

===== PuTTY log 2016.06.13 21:52:43 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      15
"Start Time  "      13:08:08
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      22
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      2.910412
"Max MASS @ "      2
"Avg MASS   "      1.06856
"Max Diam  "      0.785204
"Max Diam @ "      9
"Avg Diam  "      0.423105
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      1000
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	1.1	74.9	44	0.3299
2	2.9	75	44	0.3543
3	0.5	75.1	44	0.3463
4	1.1	75.2	44	0.3569
5	1	75.2	44	0.3568
6	1.5	75.3	44	0.3806
7	0.7	75.4	44	0.3706
8	1.4	75.6	45	0.4015
9	1.9	75.7	44	0.7852
10	0.2	75.8	44	0.3581
11	1.1	76	44	0.4939
12	1	76.1	44	0.4594
13	0.5	76.2	44	0.3907
14	0.7	76.4	44	0.4168
15	0.5	76.5	44	0.3987
16	0.3	76.6	44	0.3701
17	0.9	76.8	44	0.4483
18	1.8	76.9	44	0.5746
19	1.1	77	44	0.4946
20	1.2	77.2	44	0.4162
21	1.4	77.3	43	0.4249
22	0.7	77.4	43	0.3799

===== PuTTY log 2016.06.13 21:55:16 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      16
"Start Time  "      14:06:42
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      96
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      8.992282
"Max MASS @ "      1
"Avg MASS   "      2.580475
"Max Diam  "      0.663058
"Max Diam @ "      52
"Avg Diam  "      0.475602
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	9	80.6	43	0.6177
2	2.9	80.6	42	0.4949
3	2.3	80.6	42	0.4333
4	2.8	80.6	42	0.4435
5	2.1	80.6	42	0.4098
6	2.9	80.7	42	0.4349
7	2.1	80.7	42	0.4042
8	3.1	80.7	41	0.445
9	2.9	80.7	41	0.4371
10	2.8	80.8	41	0.493
11	2.1	80.8	41	0.4524
12	2.5	80.8	41	0.4462
13	2.7	80.8	41	0.4727
14	2.8	80.8	42	0.4797
15	3.4	80.9	42	0.5585
16	3.4	80.8	42	0.5271
17	2.6	80.9	41	0.4773
18	2.5	80.9	41	0.4274
19	1.9	80.9	41	0.411
20	2	81	41	0.4412
21	3	81	41	0.4969
22	2	81	41	0.4089
23	3	81	41	0.4442
24	2.9	81	41	0.462
25	2.7	81	41	0.4503
26	2.1	81	41	0.4244
27	1.7	81.1	41	0.4053
28	2.8	81.1	41	0.4532
29	2.9	81.1	41	0.4688
30	2.6	81.1	41	0.4694
31	3	81.1	41	0.5188
32	2.9	81.1	41	0.4532
33	3.2	81.1	41	0.5813
34	3.3	81.1	40	0.5921
35	3.2	81.1	40	0.5641
36	2.5	81.2	40	0.5176
37	2.9	81.2	40	0.5413

===== PuTTY log 2016.06.13 21:55:16 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      16
"Start Time  "      14:06:42
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      96
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      8.992282
"Max MASS @ "      1
"Avg MASS   "      2.580475
"Max Diam  "      0.663058
"Max Diam @ "      52
"Avg Diam  "      0.475602
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	2.4	81.2	40	0.4549
39	2.1	81.2	40	0.4429
40	2.8	81.2	40	0.502
41	4	81.2	40	0.6064
42	2.3	81.2	40	0.4844
43	2.8	81.2	40	0.474
44	2.1	81.3	40	0.4243
45	3	81.3	40	0.4779
46	2.7	81.3	40	0.4756
47	3	81.3	40	0.4935
48	2.2	81.3	40	0.4028
49	2.3	81.3	40	0.4031
50	2.8	81.4	40	0.4211
51	2.8	81.4	40	0.4613
52	4	81.4	40	0.6631
53	3.2	81.4	40	0.5149
54	3.6	81.4	40	0.5745
55	2.7	81.4	40	0.4587
56	2.4	81.4	40	0.4329
57	2.7	81.5	40	0.5019
58	2.3	81.5	39	0.4685
59	2.2	81.5	39	0.4793
60	2.2	81.5	39	0.4673
61	2.3	81.5	39	0.4663
62	1.9	81.6	39	0.4465
63	2.2	81.6	39	0.4555
64	3.1	81.6	39	0.5358
65	1.9	81.6	39	0.4344
66	1.8	81.6	39	0.4322
67	1.6	81.7	39	0.4228
68	2.2	81.7	39	0.4668
69	3.1	81.7	39	0.5801
70	2.7	81.7	39	0.5565
71	1.9	81.7	39	0.4939
72	2.5	81.8	39	0.5255
73	2.6	81.8	39	0.4727
74	2.7	81.8	39	0.4569

===== PuTTY log 2016.06.13 21:55:16 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      16
"Start Time  "      14:06:42
"Start Date  "      13-Jun-2016
"Log Period  "      00:01:00
"Number     "      96
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      8.992282
"Max MASS @ "      1
"Avg MASS   "      2.580475
"Max Diam  "      0.663058
"Max Diam @ "      52
"Avg Diam  "      0.475602
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      0
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	2.1	81.8	39	0.4436
76	2.3	81.8	39	0.4515
77	2.3	81.8	39	0.4786
78	2.4	81.8	39	0.5014
79	3.1	81.8	39	0.5693
80	2.6	81.8	38	0.4894
81	2.9	81.9	39	0.5074
82	2.7	81.9	39	0.5311
83	2.8	81.9	39	0.5347
84	1.9	81.9	39	0.4665
85	1.9	81.9	39	0.4802
86	2	81.9	39	0.4779
87	2.3	81.9	38	0.499
88	2.1	81.9	38	0.464
89	1.4	81.9	38	0.4254
90	1.5	81.9	38	0.4282
91	2.4	81.9	38	0.4618
92	2	81.9	38	0.4245
93	1.4	81.9	38	0.393
94	1.9	81.9	38	0.4151
95	1.3	81.9	38	0.3945
96	2.1	81.9	38	0.4307

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      17
"Start Time  "      08:10:06
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      67
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      13.97223
"Max MASS @ "      7
"Avg MASS   "      1.560567
"Max Diam  "      2.786237
"Max Diam @ "      7
"Avg Diam  "      0.49212
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	7.4	67.2	42	0.5976
2	0.3	67.2	44	0.3528
3	4.6	67.2	45	0.4442
4	0.7	67.2	45	0.3499
5	0.4	67.2	46	0.3448
6	0.3	67.2	46	0.3434
7	14	67.3	47	2.7862
8	2.2	67.3	47	0.8046
9	0.5	67.3	47	0.3881
10	0.1	67.3	47	0.3462
11	0.1	67.3	48	0.3448
12	0.4	67.3	48	0.3792
13	0.3	67.3	48	0.3626
14	0.2	67.3	48	0.3603
15	0.2	67.3	48	0.3655
16	0.6	67.3	48	0.3956
17	0.3	67.3	48	0.3645
18	1.1	67.3	48	0.461
19	0.5	67.3	48	0.3886
20	0.7	67.3	48	0.4101
21	1.6	67.3	48	0.4611
22	13.2	67.3	49	2.0975
23	3.5	67.3	49	0.8301
24	1.5	67.4	49	0.4284
25	0.2	67.3	49	0.3544
26	0	67.3	49	0.3375
27	0	67.3	49	0.3375
28	0.2	67.3	49	0.3495
29	0	67.3	49	0.3387
30	0	67.3	49	0.3375
31	0.6	67.3	49	0.3716
32	0.3	67.3	49	0.3517
33	0	67.3	49	0.3399
34	0.1	67.3	49	0.3427
35	0	67.3	49	0.3375
36	0	67.3	49	0.3378
37	0	67.3	49	0.3377

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      17
"Start Time  "      08:10:06
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      67
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      13.97223
"Max MASS @ "      7
"Avg MASS   "      1.560567
"Max Diam  "      2.786237
"Max Diam @ "      7
"Avg Diam  "      0.49212
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	67.3	49	0.3375
39	0	67.3	49	0.338
40	0	67.3	49	0.3375
41	0	67.3	49	0.3375
42	1	67.3	49	0.3851
43	1.7	67.3	49	0.4279
44	1.8	67.3	49	0.4298
45	2	67.3	49	0.4833
46	2.3	67.3	49	0.5055
47	2.6	67.3	49	0.5758
48	1.8	67.3	49	0.4652
49	2.9	67.3	49	0.526
50	1.6	67.3	49	0.4463
51	2.1	67.3	49	0.4524
52	1.4	67.3	49	0.4014
53	1.5	67.2	49	0.4028
54	0.9	67.3	49	0.3735
55	0	67.3	49	0.3375
56	0.6	67.3	50	0.3632
57	1.2	67.3	50	0.3786
58	2.2	67.3	50	0.4255
59	1.3	67.3	50	0.3944
60	2.3	67.3	49	0.4497
61	3.7	67.3	50	1.2022
62	3.3	67.3	50	0.9111
63	1.9	67.3	50	0.5256
64	2.1	67.3	50	0.5188
65	2	67.3	50	0.448
66	2.3	67.4	50	0.473
67	2.2	67.3	50	0.438

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      18
"Start Time  "      09:18:09
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      42
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.941314
"Max MASS @ "      13
"Avg MASS   "      2.321082
"Max Diam  "      1.133933
"Max Diam @ "      13
"Avg Diam  "      0.55317
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	3.7	67.3	50	0.6102
2	3.1	67.4	50	0.776
3	1	67.4	50	0.5208
4	0	67.4	50	0.3375
5	0.1	67.4	50	0.3435
6	0.4	67.4	50	0.4015
7	0.8	67.4	50	0.4635
8	0	67.4	50	0.3375
9	0	67.4	50	0.3375
10	0.8	67.4	50	0.4388
11	2.2	67.4	50	0.7732
12	2.3	67.5	50	0.6112
13	4.9	67.5	50	1.1339
14	2.8	67.5	50	0.6022
15	3	67.5	50	0.5751
16	3.9	67.5	50	0.798
17	4.1	67.5	50	1.0564
18	3.6	67.5	50	0.7101
19	3.6	67.5	50	0.6624
20	4	67.6	50	0.8098
21	4	67.6	50	1.0592
22	3.3	67.6	50	0.8129
23	2.6	67.6	50	0.5965
24	2.4	67.6	50	0.4875
25	3.2	67.6	50	0.5686
26	3.4	67.6	50	0.6214
27	3.6	67.6	50	0.71
28	2.7	67.6	50	0.4818
29	1.8	67.7	50	0.4122
30	2	67.7	50	0.3664
31	1.3	67.7	50	0.3457
32	2.8	67.8	50	0.4078
33	1.4	67.8	50	0.3733
34	0.9	67.8	50	0.3386
35	0.4	67.9	50	0.3376
36	2.6	67.9	50	0.3721
37	2.2	67.9	50	0.3836

===== PuTTY log 2016.06.20 21:43:04 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      18
"Start Time  "      09:18:09
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number      "      42
"CalFactor   "      1
"Unit        "      0
"Unit Name   "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS   "      F
"Max MASS    "      4.941314
"Max MASS @  "      13
"Avg MASS    "      2.321082
"Max Diam    "      1.133933
"Max Diam @  "      13
"Avg Diam    "      0.55317
"ALARM       "      "ENABLED"
"ALARM_LEVEL"    2500
"AUTO_ZERO   "      "DISABLED"
"AZ INTERVAL  "      1
"Errors      "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	1.4	67.9	50	0.3671
39	1.3	67.9	50	0.379
40	3.2	68	50	0.462
41	3	68	50	0.4828
42	3.7	68	50	0.5677

===== PuTTY log 2016.06.20 21:44:35 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      19
"Start Time  "      10:18:37
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      21
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      22.21266
"Max MASS @ "      1
"Avg MASS   "      4.992792
"Max Diam   "      3.347419
"Max Diam @ "      2
"Avg Diam   "      1.187507
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	22.2	68.7	50	0.8546
2	6.6	68.7	50	3.3474
3	4.4	68.8	50	1.5486
4	4.1	68.9	50	1.1829
5	3.5	68.9	49	0.8072
6	3.3	69	49	0.6416
7	5.3	69.1	49	1.2219
8	2.9	69.2	49	0.762
9	5.7	69.4	49	1.9064
10	3.1	69.6	49	0.819
11	6.1	69.7	49	2.2355
12	6.2	69.9	49	2.0266
13	2.9	70.1	49	1.1363
14	3.3	70.2	48	0.6453
15	3.6	70.4	48	0.6883
16	5.9	70.7	48	1.8719
17	3.7	70.9	48	0.8765
18	2.9	71.1	48	0.5655
19	3.6	71.3	48	0.7146
20	3	71.6	48	0.5774
21	2.7	71.8	48	0.5081

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      20
"Start Time  "      11:29:26
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      126
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      33.02623
"Max MASS @ "      1
"Avg MASS   "      1.935406
"Max Diam  "      2.839145
"Max Diam @ "      1
"Avg Diam  "      0.766286
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	33	76.2	46	2.8391
2	4.3	76.2	45	2.2714
3	4.7	76.2	44	2.2581
4	5.2	76.2	44	2.3467
5	5.3	76.2	44	2.7557
6	3.7	76.2	43	1.0258
7	5.1	76.2	43	2.2336
8	3.7	76.2	43	1.8625
9	4.1	76.1	43	1.8938
10	3.7	76.1	43	1.7649
11	4.4	76.1	43	2.2003
12	4.2	76.1	43	1.8616
13	4.8	76.2	43	1.4692
14	4.1	76.2	43	1.6872
15	4.5	76.2	43	1.8135
16	3.2	76.2	43	1.05
17	3.9	76.3	43	1.5636
18	4.3	76.3	43	2.1293
19	5.2	76.4	42	2.4647
20	4	76.5	43	1.4286
21	3.7	76.5	43	1.402
22	2.9	76.6	42	0.6741
23	3.5	76.8	43	1.2329
24	3.6	76.9	43	1.0673
25	3.3	77	43	1.495
26	2.4	77.2	43	0.6891
27	3.8	77.3	42	1.1287
28	2.4	77.5	42	0.7913
29	3.2	77.6	43	0.8834
30	2.3	77.9	42	0.4708
31	2.2	78.1	42	0.4131
32	2.1	78.2	41	0.424
33	3	78.3	41	0.6081
34	4.3	78.6	41	2.0266
35	3.1	78.8	41	0.8965
36	4.3	78.9	41	1.3898
37	2.6	79.1	40	1.31

===== PuTTY log 2016.06.20 21:46:03 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      20
"Start Time  "      11:29:26
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      126
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      33.02623
"Max MASS @ "      1
"Avg MASS   "      1.935406
"Max Diam  "      2.839145
"Max Diam @ "      1
"Avg Diam  "      0.766286
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	3.5	79.3	40	1.5987
39	3.2	79.6	40	1.086
40	1.4	79.7	40	0.4741
41	2.1	80	40	0.4694
42	1.7	80.2	40	0.4136
43	2.4	80.4	40	0.5689
44	2.5	80.7	40	0.6843
45	1.8	80.8	39	0.6604
46	1.5	81.1	39	0.5285
47	2.3	81.4	39	0.8687
48	1.7	81.6	39	0.7012
49	4.7	81.8	39	0.8819
50	2.4	82	39	1.0244
51	2.7	82.3	38	1.3277
52	2	82.5	38	0.6156
53	1.7	82.7	38	0.5715
54	2	82.9	38	0.5371
55	1.2	83.2	38	0.4672
56	1.2	83.4	37	0.4505
57	1.5	83.6	37	0.6379
58	1.4	83.8	37	0.4755
59	1.4	84	37	0.4554
60	1.8	84.2	37	0.5718
61	0.8	84.4	37	0.4353
62	1.7	84.6	36	0.5822
63	0.7	84.9	36	0.3892
64	1	85.1	36	0.4366
65	0.7	85.2	36	0.3994
66	0.1	85.4	35	0.3465
67	0.7	85.6	35	0.3998
68	0.7	85.9	35	0.4014
69	0.5	86.1	35	0.391
70	0.8	86.2	35	0.5183
71	1.3	86.4	35	0.6768
72	0.4	86.6	35	0.4012
73	0.5	86.8	34	0.4071
74	0.8	87	34	0.5592

===== PuTTY log 2016.06.20 21:46:03 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      20
"Start Time  "      11:29:26
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      126
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      33.02623
"Max MASS @ "      1
"Avg MASS   "      1.935406
"Max Diam   "      2.839145
"Max Diam @ "      1
"Avg Diam   "      0.766286
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	0.3	87.1	33	0.3863
76	0.4	87.3	33	0.4194
77	1.3	87.5	33	0.5843
78	0.4	87.7	33	0.3451
79	0	87.9	33	0.3378
80	0.8	88	33	0.3532
81	0.2	88.2	33	0.3408
82	0.1	88.3	33	0.3398
83	0	88.5	32	0.3379
84	0.3	88.7	32	0.3435
85	0.1	88.8	32	0.3389
86	0	89	31	0.338
87	0.4	89.1	31	0.3447
88	0	89.2	31	0.338
89	0	89.4	31	0.3375
90	0.2	89.6	31	0.3408
91	0.1	89.7	31	0.3401
92	0	89.8	31	0.3376
93	0.4	90	31	0.3342
94	0	90.1	31	0.3373
95	0.1	90.3	31	0.3371
96	0.8	90.5	31	0.3361
97	0.2	90.7	30	0.338
98	0	90.8	30	0.3376
99	0	91	30	0.3376
100	0.9	91.1	30	0.3549
101	1	91.3	29	0.3692
102	4.7	91.5	29	0.4396
103	0.2	91.6	29	0.3502
104	0.3	91.7	29	0.3529
105	0	91.8	29	0.3377
106	0	92	29	0.3386
107	0.1	92.2	29	0.3413
108	0	92.3	28	0.3385
109	0	92.4	28	0.3384
110	0.1	92.6	28	0.3415
111	0.5	92.6	28	0.3621

===== PuTTY log 2016.06.20 21:46:03 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      20
"Start Time  "      11:29:26
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      126
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      33.02623
"Max MASS @ "      1
"Avg MASS   "      1.935406
"Max Diam   "      2.839145
"Max Diam @ "      1
"Avg Diam   "      0.766286
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	0.5	92.7	28	0.3606
113	0.1	92.9	28	0.3423
114	0.1	93	28	0.3416
115	0.2	93.2	28	0.3448
116	0	93.3	28	0.3385
117	0.1	93.4	28	0.3408
118	0.1	93.6	28	0.3421
119	0.1	93.7	27	0.3396
120	0.5	93.9	27	0.365
121	0	94	27	0.338
122	0	94.1	27	0.3382
123	0	94.2	27	0.338
124	0	94.4	27	0.3385
125	0.8	94.5	27	0.3824
126	0	94.7	27	0.3388

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      21
"Start Time  "      14:11:03
"Start Date  "      14-Jun-2016
"Log Period  "      00:01:00
"Number     "      33
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337468
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      110
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	97	26	0.3368
2	0	96.9	26	0.3375
3	0	96.9	26	0.3375
4	0	96.8	25	0.3375
5	0	96.6	25	0.3375
6	0	96.5	25	0.3375
7	0	96.4	25	0.3375
8	0	96.3	25	0.3375
9	0	96.3	25	0.3375
10	0	96.1	25	0.3375
11	0	96.1	25	0.3375
12	0	96	25	0.3375
13	0	96	25	0.3375
14	0	96	25	0.3375
15	0	95.9	25	0.3375
16	0	95.9	25	0.3375
17	0	95.9	25	0.3375
18	0	95.9	25	0.3375
19	0	95.9	25	0.3375
20	0	95.8	25	0.3375
21	0	95.8	25	0.3375
22	0	95.8	25	0.3375
23	0	95.8	25	0.3375
24	0	95.8	25	0.3375
25	0	95.8	25	0.3375
26	0	95.8	25	0.3375
27	0	95.8	25	0.3375
28	0	95.9	25	0.3375
29	0	95.9	25	0.3375
30	0	95.8	25	0.3375
31	0	95.9	25	0.3375
32	0	95.8	24	0.3375
33	0	95.8	25	0.3375

===== PuTTY log 2016.06.20 21:47:36 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      22
"Start Time  "      08:36:04
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      18
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      2.437224
"Max MASS @ "      1
"Avg MASS   "      0.135401
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337234
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	2.4	70.3	33	0.3329
2	0	70.4	36	0.3375
3	0	70.5	38	0.3375
4	0	70.6	40	0.3375
5	0	70.7	41	0.3375
6	0	70.8	42	0.3375
7	0	70.8	43	0.3375
8	0	70.9	44	0.3375
9	0	71	45	0.3375
10	0	71	45	0.3375
11	0	71.1	45	0.3375
12	0	71.2	46	0.3375
13	0	71.3	46	0.3375
14	0	71.4	46	0.3375
15	0	71.5	47	0.3375
16	0	71.6	47	0.3375
17	0	71.6	47	0.3375
18	0	71.7	47	0.3375

===== PuTTY log 2016.06.20 21:48:15 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      23
"Start Time  "      09:07:31
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      6
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337428
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	72.6	47	0.3371
2	0	72.6	47	0.3375
3	0	72.8	48	0.3375
4	0	72.8	48	0.3375
5	0	72.9	48	0.3375
6	0	73	49	0.3375

===== PuTTY log 2016.06.20 21:48:45 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      24
"Start Time  "      09:23:51
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      64
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337479
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	74.5	49	0.3368
2	0	74.6	48	0.3375
3	0	74.8	48	0.3375
4	0	74.9	48	0.3375
5	0	75.2	48	0.3375
6	0	75.3	48	0.3375
7	0	75.4	48	0.3375
8	0	75.5	48	0.3375
9	0	75.7	48	0.3375
10	0	75.8	47	0.3375
11	0	75.9	47	0.3375
12	0	76	47	0.3375
13	0	76.1	47	0.3375
14	0	76.2	47	0.3375
15	0	76.3	47	0.3375
16	0	76.3	47	0.3375
17	0	76.4	47	0.3375
18	0	76.4	46	0.3375
19	0	76.5	46	0.3375
20	0	76.5	46	0.3375
21	0	76.6	46	0.3375
22	0	76.6	46	0.3375
23	0	76.7	46	0.3375
24	0	76.7	45	0.3375
25	0	76.8	45	0.3375
26	0	76.9	45	0.3375
27	0	76.9	46	0.3375
28	0	76.9	46	0.3375
29	0	77	45	0.3375
30	0	77	45	0.3375
31	0	77	45	0.3375
32	0	77	45	0.3375
33	0	77.1	45	0.3375
34	0	77.1	45	0.3375
35	0	77.1	45	0.3375
36	0	77.1	45	0.3375
37	0	77.2	45	0.3375

===== PuTTY log 2016.06.20 21:48:45 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      24
"Start Time  "      09:23:51
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      64
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337479
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	77.2	45	0.3375
39	0	77.2	45	0.3375
40	0	77.2	45	0.3375
41	0	77.2	45	0.3375
42	0	77.2	45	0.3375
43	0	77.3	45	0.3375
44	0	77.3	45	0.3375
45	0	77.3	45	0.3375
46	0	77.3	45	0.3375
47	0	77.3	45	0.3375
48	0	77.4	45	0.3375
49	0	77.4	45	0.3375
50	0	77.4	45	0.3375
51	0	77.4	45	0.3375
52	0	77.4	45	0.3375
53	0	77.5	45	0.3375
54	0	77.5	45	0.3375
55	0	77.5	45	0.3375
56	0	77.6	45	0.3375
57	0	77.6	45	0.3375
58	0	77.7	45	0.3375
59	0	77.7	45	0.3375
60	0	77.7	45	0.3375
61	0	77.7	45	0.3375
62	0	77.7	45	0.3375
63	0	77.8	45	0.3375
64	0	77.8	45	0.3375

===== PuTTY log 2016.06.20 21:49:12 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      25
"Start Time  "      11:00:02
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      91
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0.184447
"Max MASS @ "      64
"Avg MASS   "      0.002027
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337475
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	79.1	44	0.3368
2	0	79.2	44	0.3375
3	0	79.2	44	0.3375
4	0	79.3	44	0.3375
5	0	79.4	44	0.3375
6	0	79.5	44	0.3375
7	0	79.5	44	0.3375
8	0	79.6	44	0.3375
9	0	79.7	44	0.3375
10	0	79.8	44	0.3375
11	0	79.8	43	0.3375
12	0	79.9	43	0.3375
13	0	80	43	0.3375
14	0	80	43	0.3375
15	0	80.1	43	0.3375
16	0	80.2	43	0.3375
17	0	80.2	43	0.3375
18	0	80.4	43	0.3375
19	0	80.5	43	0.3375
20	0	80.6	43	0.3375
21	0	80.7	43	0.3375
22	0	80.8	43	0.3375
23	0	80.9	42	0.3375
24	0	80.9	42	0.3375
25	0	81.1	42	0.3375
26	0	81.1	42	0.3375
27	0	81.3	42	0.3375
28	0	81.4	42	0.3375
29	0	81.5	42	0.3375
30	0	81.6	42	0.3375
31	0	81.7	42	0.3375
32	0	81.8	42	0.3375
33	0	82	42	0.3375
34	0	82.1	42	0.3375
35	0	82.2	42	0.3375
36	0	82.4	42	0.3375
37	0	82.5	42	0.3375

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      25
"Start Time  "      11:00:02
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      91
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0.184447
"Max MASS @ "      64
"Avg MASS   "      0.002027
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337475
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	82.6	42	0.3375
39	0	82.7	42	0.3375
40	0	82.8	41	0.3375
41	0	82.9	41	0.3375
42	0	83	42	0.3375
43	0	83.3	41	0.3375
44	0	83.3	41	0.3375
45	0	83.5	41	0.3375
46	0	83.6	41	0.3375
47	0	83.6	41	0.3375
48	0	83.7	41	0.3375
49	0	83.9	41	0.3375
50	0	84	41	0.3375
51	0	84.2	41	0.3375
52	0	84.3	41	0.3375
53	0	84.4	41	0.3375
54	0	84.5	40	0.3375
55	0	84.6	40	0.3375
56	0	84.8	40	0.3375
57	0	84.9	40	0.3375
58	0	85.1	40	0.3375
59	0	85.2	39	0.3375
60	0	85.4	39	0.3375
61	0	85.5	39	0.3375
62	0	85.6	39	0.3375
63	0	85.8	39	0.3375
64	0.2	86	38	0.3369
65	0	86.1	38	0.3375
66	0	86.2	38	0.3375
67	0	86.3	38	0.3375
68	0	86.5	38	0.3375
69	0	86.7	38	0.3375
70	0	86.9	38	0.3375
71	0	87	38	0.3375
72	0	87.2	37	0.3375
73	0	87.3	38	0.3375
74	0	87.5	37	0.3375

===== PuTTY log 2016.06.20 21:49:12 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      25
"Start Time  "      11:00:02
"Start Date  "      15-Jun-2016
"Log Period  "      00:01:00
"Number     "      91
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0.184447
"Max MASS @ "      64
"Avg MASS   "      0.002027
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337475
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	0	87.8	37	0.3375
76	0	87.9	37	0.3375
77	0	88.1	37	0.3375
78	0	88.2	37	0.3375
79	0	88.4	36	0.3375
80	0	88.7	36	0.3375
81	0	88.9	36	0.3375
82	0	89	36	0.3375
83	0	89.2	36	0.3375
84	0	89.4	36	0.3375
85	0	89.7	36	0.3375
86	0	89.8	36	0.3375
87	0	90	36	0.3375
88	0	90.2	35	0.3375
89	0	90.4	35	0.3375
90	0	90.6	35	0.3375
91	0	90.9	35	0.3375

===== PuTTY log 2016.06.20 21:49:42 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      26
"Start Time  "      08:15:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      41
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.699668
"Max MASS @ "      4
"Avg MASS   "      0.125714
"Max Diam  "      0.338398
"Max Diam @ "      2
"Avg Diam  "      0.337378
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      10
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	68.9	38	0.3368
2	0.5	69	42	0.3384
3	0	69	45	0.3375
4	4.7	69.1	47	0.3327
5	0	69.2	49	0.3375
6	0	69.2	50	0.3375
7	0	69.3	51	0.3375
8	0	69.3	51	0.3375
9	0	69.4	52	0.3375
10	0	69.4	53	0.3375
11	0	69.5	53	0.3375
12	0	69.5	54	0.3375
13	0	69.6	54	0.3375
14	0	69.7	54	0.3375
15	0	69.7	55	0.3375
16	0	69.8	55	0.3375
17	0	69.8	55	0.3375
18	0	69.8	55	0.3375
19	0	69.9	55	0.3375
20	0	69.9	56	0.3375
21	0	69.9	56	0.3375
22	0	70	56	0.3375
23	0	70.1	56	0.3375
24	0	70.1	57	0.3375
25	0	70.1	57	0.3375
26	0	70.1	57	0.3375
27	0	70.1	57	0.3375
28	0	70.2	57	0.3375
29	0	70.2	57	0.3375
30	0	70.2	57	0.3375
31	0	70.2	57	0.3375
32	0	70.3	58	0.3375
33	0	70.3	58	0.3375
34	0	70.3	58	0.3375
35	0	70.4	58	0.3375
36	0	70.4	58	0.3375
37	0	70.4	58	0.3375

===== PuTTY log 2016.06.20 21:49:42 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      26
"Start Time  "      08:15:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      41
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      4.699668
"Max MASS @ "      4
"Avg MASS   "      0.125714
"Max Diam   "      0.338398
"Max Diam @ "      2
"Avg Diam   "      0.337378
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      10

```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	70.5	58	0.3375
39	0	70.6	58	0.3375
40	0	70.6	58	0.3375
41	0	70.6	59	0.3375

===== PuTTY log 2016.06.20 21:50:05 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      27
"Start Time  "      10:04:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      158
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337486
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      110
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
1	0	72.5	58	0.3368
2	0	72.6	58	0.3375
3	0	72.5	58	0.3375
4	0	72.6	58	0.3375
5	0	72.6	59	0.3375
6	0	72.7	59	0.3375
7	0	72.7	59	0.3375
8	0	72.7	59	0.3375
9	0	72.8	59	0.3375
10	0	72.8	59	0.3375
11	0	72.9	59	0.3375
12	0	72.9	60	0.3375
13	0	73	60	0.3375
14	0	73.1	60	0.3375
15	0	73.1	60	0.3375
16	0	73.2	60	0.3375
17	0	73.3	60	0.3375
18	0	73.4	60	0.3375
19	0	73.4	59	0.3375
20	0	73.5	59	0.3375
21	0	73.6	60	0.3375
22	0	73.6	59	0.3375
23	0	73.7	59	0.3375
24	0	73.7	59	0.3375
25	0	73.7	59	0.3375
26	0	73.9	59	0.3375
27	0	73.8	59	0.3375
28	0	73.9	59	0.3375
29	0	74	59	0.3375
30	0	74.1	58	0.3375
31	0	74.2	59	0.3375
32	0	74.3	58	0.3375
33	0	74.3	58	0.3375
34	0	74.4	58	0.3375
35	0	74.4	58	0.3375
36	0	74.5	58	0.3375
37	0	74.6	58	0.3375

===== PuTTY log 2016.06.20 21:50:05 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      27
"Start Time  "      10:04:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      158
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337486
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      110
  
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
38	0	74.7	58	0.3375
39	0	74.8	58	0.3375
40	0	74.8	58	0.3375
41	0	74.9	58	0.3375
42	0	75.1	58	0.3375
43	0	75.2	58	0.3375
44	0	75.2	58	0.3375
45	0	75.3	57	0.3375
46	0	75.4	57	0.3375
47	0	75.5	57	0.3375
48	0	75.6	57	0.3375
49	0	75.7	57	0.3375
50	0	75.9	57	0.3375
51	0	76	57	0.3375
52	0	76.1	58	0.3375
53	0	76.2	57	0.3375
54	0	76.4	57	0.3375
55	0	76.5	57	0.3375
56	0	76.6	57	0.3375
57	0	76.8	57	0.3375
58	0	77	56	0.3375
59	0	77.2	56	0.3375
60	0	77.3	56	0.3375
61	0	77.5	56	0.3375
62	0	77.7	56	0.3375
63	0	77.9	55	0.3375
64	0	78.1	55	0.3375
65	0	78.2	55	0.3375
66	0	78.4	55	0.3375
67	0	78.6	54	0.3375
68	0	78.8	54	0.3375
69	0	78.9	54	0.3375
70	0	79	54	0.3375
71	0	79.1	54	0.3375
72	0	79.2	53	0.3375
73	0	79.4	53	0.3375
74	0	79.5	52	0.3375

===== PuTTY log 2016.06.20 21:50:05 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      27
"Start Time  "      10:04:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      158
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam   "      0.33749
"Max Diam @ "      2
"Avg Diam   "      0.337486
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      110
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
75	0	79.6	52	0.3375
76	0	79.7	52	0.3375
77	0	79.9	52	0.3375
78	0	79.9	52	0.3375
79	0	80	52	0.3375
80	0	80.1	52	0.3375
81	0	80.2	52	0.3375
82	0	80.2	52	0.3375
83	0	80.4	51	0.3375
84	0	80.5	51	0.3375
85	0	80.6	51	0.3375
86	0	80.7	51	0.3375
87	0	80.8	51	0.3375
88	0	80.9	51	0.3375
89	0	81	51	0.3375
90	0	81.1	50	0.3375
91	0	81.2	50	0.3375
92	0	81.4	50	0.3375
93	0	81.5	50	0.3375
94	0	81.7	50	0.3375
95	0	81.7	50	0.3375
96	0	81.8	50	0.3375
97	0	82	49	0.3375
98	0	82.1	49	0.3375
99	0	82.2	49	0.3375
100	0	82.4	49	0.3375
101	0	82.5	49	0.3375
102	0	82.6	49	0.3375
103	0	82.8	49	0.3375
104	0	82.8	49	0.3375
105	0	82.9	49	0.3375
106	0	83.1	48	0.3375
107	0	83.2	48	0.3375
108	0	83.3	48	0.3375
109	0	83.4	48	0.3375
110	0	83.5	48	0.3375
111	0	83.6	48	0.3375

===== PuTTY log 2016.06.20 21:50:05 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      27
"Start Time  "      10:04:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      158
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337486
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"Errors    "      110
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
112	0	83.6	47	0.3375
113	0	83.8	47	0.3375
114	0	83.8	47	0.3375
115	0	83.9	47	0.3375
116	0	84	47	0.3375
117	0	84.1	47	0.3375
118	0	84.2	46	0.3375
119	0	84.3	46	0.3375
120	0	84.4	46	0.3375
121	0	84.5	46	0.3375
122	0	84.6	46	0.3375
123	0	84.7	46	0.3375
124	0	84.7	46	0.3375
125	0	84.8	46	0.3375
126	0	85	45	0.3375
127	0	85.1	45	0.3375
128	0	85.2	45	0.3375
129	0	85.3	45	0.3375
130	0	85.3	45	0.3375
131	0	85.4	45	0.3375
132	0	85.5	45	0.3375
133	0	85.6	46	0.3375
134	0	85.7	45	0.3375
135	0	85.9	45	0.3375
136	0	86	45	0.3375
137	0	86.1	45	0.3375
138	0	86.2	45	0.3375
139	0	86.4	44	0.3375
140	0	86.5	44	0.3375
141	0	86.7	44	0.3375
142	0	86.9	44	0.3375
143	0	87	44	0.3375
144	0	87.2	43	0.3375
145	0	87.3	43	0.3375
146	0	87.5	43	0.3375
147	0	87.7	43	0.3375
148	0	87.9	43	0.3375

===== PuTTY log 2016.06.20 21:50:05 =====

```

"Model Number"      "DataRAM 4 "      106
"Serial no.  "      "D330  "
"Device no.  "      55
"Tag Number  "      27
"Start Time  "      10:04:33
"Start Date  "      16-Jun-2016
"Log Period  "      00:01:00
"Number     "      158
"CalFactor  "      1
"Unit      "      0
"Unit Name  "      "(MASS )ug/m3"
"SIZE_CORRECT"    "DISABLED"
"TEMPUNITS  "      F
"Max MASS   "      0
"Max MASS @ "      0
"Avg MASS   "      0
"Max Diam  "      0.33749
"Max Diam @ "      2
"Avg Diam  "      0.337486
"ALARM     "      "ENABLED"
"ALARM_LEVEL "    2500
"AUTO_ZERO  "      "DISABLED"
"AZ INTERVAL "    1
"errors    "      110
    
```

record	(MASS)ug/m3	Temp	RHumidity	Diameter
149	0	88.1	43	0.3375
150	0	88.2	43	0.3375
151	0	88.3	43	0.3375
152	0	88.6	43	0.3375
153	0	88.7	42	0.3375
154	0	88.9	42	0.3375
155	0	89	42	0.3375
156	0	89.1	42	0.3375
157	0	89.3	42	0.3375
158	0	89.5	41	0.3375

=====

16/06/07 12:19

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-905808
Unit Firmware Ver	V1.10A

Running Mode	Hygiene Mode
Measure Type	Min; Avg; Max; Real
Datalog Mode	Continuous
Datalog Type	Manual
Diagnostic Mode	No
Stop Reason	Power Down

Site ID	1
User ID	1

Begin	6/7/2016 12:19
End	6/7/2016 12:19
Sample Period(s)	60
Number of Records	0

Sensor	VOC(ppm)
Span	100
Span 2	N/A
Low Alarm	50
High Alarm	100
Over Alarm	15000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutene
Calibration Time	6/7/2016 12:17

Datalog

0 record.

=====

16/06/07 12:38

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-905808

Unit Firmware Ver V1.10A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID 1
User ID 1

Begin 6/7/2016 12:38
End 6/7/2016 16:14
Sample Period(s) 60
Number of Records 215

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/7/2016 12:17
Peak 0.208
Min 0
Average 0.1

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/7/2016 12:39	0	0	0	0
2	6/7/2016 12:40	0	0.007	0.033	0
3	6/7/2016 12:41	0	0	0	0
4	6/7/2016 12:42	0	0	0.013	0
5	6/7/2016 12:43	0	0	0	0
6	6/7/2016 12:44	0	0.002	0.027	0
7	6/7/2016 12:45	0	0.014	0.03	0.017
8	6/7/2016 12:46	0	0.006	0.023	0.011
9	6/7/2016 12:47	0.012	0.022	0.042	0.019
10	6/7/2016 12:48	0.004	0.029	0.048	0.041
11	6/7/2016 12:49	0.008	0.027	0.042	0.036
12	6/7/2016 12:50	0	0.026	0.056	0.009

13	6/7/2016 12:51	0	0.006	0.028	0.003
14	6/7/2016 12:52	0	0	0.004	0
15	6/7/2016 12:53	0	0	0.002	0
16	6/7/2016 12:54	0	0.01	0.042	0.001
17	6/7/2016 12:55	0	0.001	0.014	0
18	6/7/2016 12:56	0	0	0.009	0
19	6/7/2016 12:57	0	0.009	0.043	0.025
20	6/7/2016 12:58	0.022	0.032	0.045	0.028
21	6/7/2016 12:59	0.025	0.042	0.075	0.029
22	6/7/2016 13:00	0.034	0.054	0.083	0.069
23	6/7/2016 13:01	0.013	0.046	0.077	0.033
24	6/7/2016 13:02	0.029	0.04	0.057	0.037
25	6/7/2016 13:03	0.007	0.028	0.05	0.026
26	6/7/2016 13:04	0.019	0.036	0.061	0.031
27	6/7/2016 13:05	0.026	0.04	0.054	0.054
28	6/7/2016 13:06	0.022	0.044	0.06	0.039
29	6/7/2016 13:07	0.012	0.026	0.044	0.023
30	6/7/2016 13:08	0.022	0.041	0.079	0.042
31	6/7/2016 13:09	0.031	0.053	0.086	0.031
32	6/7/2016 13:10	0.031	0.057	0.072	0.072
33	6/7/2016 13:11	0.042	0.058	0.08	0.07
34	6/7/2016 13:12	0.035	0.047	0.068	0.042
35	6/7/2016 13:13	0.037	0.053	0.093	0.049
36	6/7/2016 13:14	0.038	0.055	0.077	0.069
37	6/7/2016 13:15	0.022	0.039	0.065	0.035
38	6/7/2016 13:16	0.02	0.036	0.06	0.032
39	6/7/2016 13:17	0.031	0.044	0.067	0.039
40	6/7/2016 13:18	0.028	0.042	0.067	0.054
41	6/7/2016 13:19	0.035	0.051	0.069	0.048
42	6/7/2016 13:20	0.037	0.046	0.062	0.047
43	6/7/2016 13:21	0.035	0.05	0.074	0.057
44	6/7/2016 13:22	0.043	0.054	0.073	0.048
45	6/7/2016 13:23	0.038	0.047	0.063	0.044
46	6/7/2016 13:24	0.041	0.048	0.056	0.047
47	6/7/2016 13:25	0.027	0.049	0.074	0.038
48	6/7/2016 13:26	0.03	0.048	0.071	0.042
49	6/7/2016 13:27	0.037	0.05	0.062	0.059
50	6/7/2016 13:28	0.056	0.073	0.092	0.086
51	6/7/2016 13:29	0.043	0.057	0.091	0.061
52	6/7/2016 13:30	0.048	0.054	0.089	0.089
53	6/7/2016 13:31	0.047	0.072	0.099	0.047
54	6/7/2016 13:32	0.044	0.061	0.084	0.076
55	6/7/2016 13:33	0.048	0.07	0.098	0.062
56	6/7/2016 13:34	0.06	0.076	0.112	0.069
57	6/7/2016 13:35	0.047	0.063	0.074	0.063
58	6/7/2016 13:36	0.063	0.069	0.077	0.076
59	6/7/2016 13:37	0.066	0.081	0.097	0.09

60	6/7/2016 13:38	0.065	0.094	0.114	0.065
61	6/7/2016 13:39	0.064	0.088	0.111	0.086
62	6/7/2016 13:40	0.061	0.081	0.103	0.093
63	6/7/2016 13:41	0.07	0.088	0.104	0.096
64	6/7/2016 13:42	0.072	0.09	0.107	0.085
65	6/7/2016 13:43	0.071	0.083	0.106	0.075
66	6/7/2016 13:44	0.073	0.085	0.104	0.081
67	6/7/2016 13:45	0.073	0.081	0.099	0.075
68	6/7/2016 13:46	0.065	0.088	0.108	0.096
69	6/7/2016 13:47	0.073	0.088	0.102	0.073
70	6/7/2016 13:48	0.073	0.08	0.092	0.077
71	6/7/2016 13:49	0.074	0.084	0.104	0.077
72	6/7/2016 13:50	0.076	0.095	0.122	0.095
73	6/7/2016 13:51	0.079	0.097	0.124	0.101
74	6/7/2016 13:52	0.089	0.099	0.113	0.098
75	6/7/2016 13:53	0.078	0.096	0.117	0.078
76	6/7/2016 13:54	0.08	0.095	0.107	0.085
77	6/7/2016 13:55	0.078	0.09	0.109	0.082
78	6/7/2016 13:56	0.075	0.084	0.099	0.085
79	6/7/2016 13:57	0.077	0.085	0.11	0.11
80	6/7/2016 13:58	0.087	0.102	0.136	0.087
81	6/7/2016 13:59	0.079	0.09	0.11	0.11
82	6/7/2016 14:00	0.079	0.094	0.113	0.107
83	6/7/2016 14:01	0.071	0.089	0.104	0.087
84	6/7/2016 14:02	0.087	0.114	0.14	0.111
85	6/7/2016 14:03	0.091	0.113	0.144	0.101
86	6/7/2016 14:04	0.102	0.119	0.143	0.118
87	6/7/2016 14:05	0.099	0.115	0.133	0.124
88	6/7/2016 14:06	0.1	0.115	0.149	0.149
89	6/7/2016 14:07	0.105	0.122	0.149	0.137
90	6/7/2016 14:08	0.108	0.122	0.141	0.127
91	6/7/2016 14:09	0.103	0.113	0.128	0.105
92	6/7/2016 14:10	0.1	0.109	0.129	0.118
93	6/7/2016 14:11	0.104	0.121	0.136	0.129
94	6/7/2016 14:12	0.106	0.116	0.13	0.12
95	6/7/2016 14:13	0.115	0.123	0.135	0.121
96	6/7/2016 14:14	0.11	0.121	0.139	0.126
97	6/7/2016 14:15	0.104	0.117	0.132	0.119
98	6/7/2016 14:16	0.106	0.116	0.128	0.128
99	6/7/2016 14:17	0.096	0.109	0.128	0.1
100	6/7/2016 14:18	0.088	0.107	0.131	0.13
101	6/7/2016 14:19	0.107	0.121	0.14	0.124
102	6/7/2016 14:20	0.113	0.129	0.147	0.136
103	6/7/2016 14:21	0.113	0.123	0.145	0.113
104	6/7/2016 14:22	0.112	0.126	0.147	0.133
105	6/7/2016 14:23	0.128	0.138	0.148	0.144
106	6/7/2016 14:24	0.11	0.121	0.153	0.114

107	6/7/2016 14:25	0.115	0.125	0.139	0.123
108	6/7/2016 14:26	0.119	0.131	0.141	0.131
109	6/7/2016 14:27	0.126	0.136	0.146	0.137
110	6/7/2016 14:28	0.128	0.138	0.158	0.147
111	6/7/2016 14:29	0.119	0.133	0.154	0.125
112	6/7/2016 14:30	0.118	0.131	0.144	0.134
113	6/7/2016 14:31	0.12	0.13	0.144	0.134
114	6/7/2016 14:32	0.129	0.14	0.155	0.148
115	6/7/2016 14:33	0.124	0.133	0.151	0.135
116	6/7/2016 14:34	0.114	0.129	0.143	0.143
117	6/7/2016 14:35	0.116	0.139	0.158	0.13
118	6/7/2016 14:36	0.114	0.141	0.169	0.114
119	6/7/2016 14:37	0.114	0.126	0.147	0.144
120	6/7/2016 14:38	0.13	0.141	0.148	0.146
121	6/7/2016 14:39	0.13	0.135	0.146	0.13
122	6/7/2016 14:40	0.12	0.126	0.136	0.131
123	6/7/2016 14:41	0.105	0.122	0.133	0.115
124	6/7/2016 14:42	0.106	0.119	0.132	0.122
125	6/7/2016 14:43	0.113	0.126	0.142	0.142
126	6/7/2016 14:44	0.118	0.134	0.149	0.134
127	6/7/2016 14:45	0.115	0.13	0.138	0.136
128	6/7/2016 14:46	0.119	0.129	0.151	0.136
129	6/7/2016 14:47	0.128	0.143	0.159	0.155
130	6/7/2016 14:48	0.129	0.147	0.168	0.161
131	6/7/2016 14:49	0.148	0.156	0.167	0.163
132	6/7/2016 14:50	0.138	0.152	0.171	0.146
133	6/7/2016 14:51	0.137	0.151	0.164	0.145
134	6/7/2016 14:52	0.128	0.152	0.17	0.128
135	6/7/2016 14:53	0.123	0.136	0.159	0.123
136	6/7/2016 14:54	0.117	0.143	0.171	0.138
137	6/7/2016 14:55	0.119	0.128	0.147	0.147
138	6/7/2016 14:56	0.146	0.156	0.177	0.149
139	6/7/2016 14:57	0.15	0.174	0.189	0.189
140	6/7/2016 14:58	0.134	0.157	0.192	0.135
141	6/7/2016 14:59	0.13	0.147	0.169	0.169
142	6/7/2016 15:00	0.171	0.19	0.21	0.203
143	6/7/2016 15:01	0.142	0.184	0.2	0.142
144	6/7/2016 15:02	0.137	0.159	0.208	0.176
145	6/7/2016 15:03	0.156	0.179	0.21	0.205
146	6/7/2016 15:04	0.171	0.194	0.224	0.178
147	6/7/2016 15:05	0.15	0.169	0.191	0.163
148	6/7/2016 15:06	0.136	0.152	0.165	0.149
149	6/7/2016 15:07	0.15	0.177	0.218	0.208
150	6/7/2016 15:08	0.169	0.186	0.223	0.172
151	6/7/2016 15:09	0.151	0.163	0.192	0.158
152	6/7/2016 15:10	0.15	0.167	0.188	0.158
153	6/7/2016 15:11	0.131	0.158	0.179	0.132

154	6/7/2016 15:12	0.132	0.164	0.196	0.176
155	6/7/2016 15:13	0.128	0.159	0.178	0.132
156	6/7/2016 15:14	0.107	0.136	0.172	0.107
157	6/7/2016 15:15	0.102	0.112	0.132	0.131
158	6/7/2016 15:16	0.131	0.156	0.183	0.142
159	6/7/2016 15:17	0.131	0.145	0.157	0.151
160	6/7/2016 15:18	0.134	0.154	0.176	0.143
161	6/7/2016 15:19	0.139	0.145	0.159	0.145
162	6/7/2016 15:20	0.132	0.14	0.148	0.141
163	6/7/2016 15:21	0.115	0.134	0.153	0.153
164	6/7/2016 15:22	0.115	0.139	0.165	0.14
165	6/7/2016 15:23	0.105	0.121	0.138	0.129
166	6/7/2016 15:24	0.129	0.14	0.152	0.133
167	6/7/2016 15:25	0.109	0.124	0.136	0.131
168	6/7/2016 15:26	0.129	0.141	0.157	0.146
169	6/7/2016 15:27	0.126	0.139	0.154	0.127
170	6/7/2016 15:28	0.127	0.139	0.154	0.135
171	6/7/2016 15:29	0.112	0.124	0.136	0.124
172	6/7/2016 15:30	0.114	0.127	0.135	0.114
173	6/7/2016 15:31	0.113	0.122	0.139	0.115
174	6/7/2016 15:32	0.114	0.123	0.138	0.133
175	6/7/2016 15:33	0.113	0.128	0.141	0.122
176	6/7/2016 15:34	0.124	0.131	0.144	0.143
177	6/7/2016 15:35	0.099	0.116	0.145	0.124
178	6/7/2016 15:36	0.085	0.101	0.121	0.095
179	6/7/2016 15:37	0.084	0.096	0.122	0.091
180	6/7/2016 15:38	0.076	0.091	0.108	0.108
181	6/7/2016 15:39	0.105	0.113	0.13	0.129
182	6/7/2016 15:40	0.105	0.117	0.132	0.106
183	6/7/2016 15:41	0.095	0.107	0.127	0.127
184	6/7/2016 15:42	0.082	0.105	0.134	0.115
185	6/7/2016 15:43	0.087	0.101	0.122	0.105
186	6/7/2016 15:44	0.084	0.1	0.117	0.099
187	6/7/2016 15:45	0.101	0.116	0.127	0.113
188	6/7/2016 15:46	0.091	0.105	0.128	0.114
189	6/7/2016 15:47	0.096	0.117	0.143	0.137
190	6/7/2016 15:48	0.101	0.119	0.139	0.123
191	6/7/2016 15:49	0.099	0.109	0.127	0.111
192	6/7/2016 15:50	0.086	0.106	0.122	0.095
193	6/7/2016 15:51	0.089	0.1	0.11	0.101
194	6/7/2016 15:52	0.099	0.115	0.12	0.115
195	6/7/2016 15:53	0.077	0.086	0.112	0.079
196	6/7/2016 15:54	0.08	0.099	0.11	0.103
197	6/7/2016 15:55	0.097	0.105	0.123	0.123
198	6/7/2016 15:56	0.112	0.119	0.132	0.12
199	6/7/2016 15:57	0.092	0.111	0.125	0.122
200	6/7/2016 15:58	0.113	0.12	0.132	0.132

201	6/7/2016 15:59	0.103	0.121	0.143	0.106
202	6/7/2016 16:00	0.091	0.117	0.127	0.091
203	6/7/2016 16:01	0.087	0.1	0.114	0.105
204	6/7/2016 16:02	0.085	0.094	0.105	0.094
205	6/7/2016 16:03	0.074	0.084	0.099	0.085
206	6/7/2016 16:04	0.083	0.093	0.116	0.09
207	6/7/2016 16:05	0.092	0.116	0.13	0.127
208	6/7/2016 16:06	0.081	0.098	0.126	0.092
209	6/7/2016 16:07	0.095	0.103	0.116	0.102
210	6/7/2016 16:08	0.079	0.09	0.101	0.08
211	6/7/2016 16:09	0.081	0.101	0.122	0.113
212	6/7/2016 16:10	0.094	0.109	0.123	0.121
213	6/7/2016 16:11	0.079	0.099	0.12	0.106
214	6/7/2016 16:12	0.079	0.096	0.115	0.093
215	6/7/2016 16:13	0.094	0.114	0.12	0.113

Peak	0.171	0.194	0.224	0.208
Min	0	0	0	0
Average	0.084	0.099	0.118	0.1

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/7/2016 12:39	0	---
2	6/7/2016 12:40	0	---
3	6/7/2016 12:41	0	---
4	6/7/2016 12:42	0	---
5	6/7/2016 12:43	0	---
6	6/7/2016 12:44	0	---
7	6/7/2016 12:45	0	---
8	6/7/2016 12:46	0	---
9	6/7/2016 12:47	0	---
10	6/7/2016 12:48	0	---
11	6/7/2016 12:49	0	---
12	6/7/2016 12:50	0	---
13	6/7/2016 12:51	0	---
14	6/7/2016 12:52	0	---
15	6/7/2016 12:53	0	0.009
16	6/7/2016 12:54	0	0.009
17	6/7/2016 12:55	0	0.009
18	6/7/2016 12:56	0	0.009
19	6/7/2016 12:57	0	0.011

20	6/7/2016 12:58	0	0.013
21	6/7/2016 12:59	0	0.015
22	6/7/2016 13:00	0.001	0.018
23	6/7/2016 13:01	0.001	0.02
24	6/7/2016 13:02	0.001	0.021
25	6/7/2016 13:03	0.001	0.02
26	6/7/2016 13:04	0.001	0.019
27	6/7/2016 13:05	0.001	0.022
28	6/7/2016 13:06	0.001	0.025
29	6/7/2016 13:07	0.001	0.026
30	6/7/2016 13:08	0.001	0.029
31	6/7/2016 13:09	0.001	0.031
32	6/7/2016 13:10	0.001	0.036
33	6/7/2016 13:11	0.002	0.041
34	6/7/2016 13:12	0.002	0.042
35	6/7/2016 13:13	0.002	0.043
36	6/7/2016 13:14	0.002	0.046
37	6/7/2016 13:15	0.002	0.044
38	6/7/2016 13:16	0.002	0.043
39	6/7/2016 13:17	0.002	0.044
40	6/7/2016 13:18	0.002	0.045
41	6/7/2016 13:19	0.002	0.047
42	6/7/2016 13:20	0.002	0.046
43	6/7/2016 13:21	0.003	0.047
44	6/7/2016 13:22	0.003	0.049
45	6/7/2016 13:23	0.003	0.049
46	6/7/2016 13:24	0.003	0.05
47	6/7/2016 13:25	0.003	0.048
48	6/7/2016 13:26	0.003	0.046
49	6/7/2016 13:27	0.003	0.047
50	6/7/2016 13:28	0.003	0.05
51	6/7/2016 13:29	0.003	0.049
52	6/7/2016 13:30	0.004	0.053
53	6/7/2016 13:31	0.004	0.054
54	6/7/2016 13:32	0.004	0.056
55	6/7/2016 13:33	0.004	0.057
56	6/7/2016 13:34	0.004	0.058
57	6/7/2016 13:35	0.004	0.059
58	6/7/2016 13:36	0.004	0.06
59	6/7/2016 13:37	0.005	0.063
60	6/7/2016 13:38	0.005	0.065
61	6/7/2016 13:39	0.005	0.067
62	6/7/2016 13:40	0.005	0.071
63	6/7/2016 13:41	0.005	0.075
64	6/7/2016 13:42	0.005	0.076
65	6/7/2016 13:43	0.006	0.076
66	6/7/2016 13:44	0.006	0.077

67	6/7/2016 13:45	0.006	0.076
68	6/7/2016 13:46	0.006	0.079
69	6/7/2016 13:47	0.006	0.079
70	6/7/2016 13:48	0.006	0.08
71	6/7/2016 13:49	0.007	0.081
72	6/7/2016 13:50	0.007	0.083
73	6/7/2016 13:51	0.007	0.084
74	6/7/2016 13:52	0.007	0.085
75	6/7/2016 13:53	0.007	0.086
76	6/7/2016 13:54	0.008	0.086
77	6/7/2016 13:55	0.008	0.085
78	6/7/2016 13:56	0.008	0.084
79	6/7/2016 13:57	0.008	0.086
80	6/7/2016 13:58	0.008	0.087
81	6/7/2016 13:59	0.009	0.089
82	6/7/2016 14:00	0.009	0.091
83	6/7/2016 14:01	0.009	0.09
84	6/7/2016 14:02	0.009	0.093
85	6/7/2016 14:03	0.009	0.094
86	6/7/2016 14:04	0.01	0.097
87	6/7/2016 14:05	0.01	0.099
88	6/7/2016 14:06	0.01	0.102
89	6/7/2016 14:07	0.011	0.105
90	6/7/2016 14:08	0.011	0.108
91	6/7/2016 14:09	0.011	0.109
92	6/7/2016 14:10	0.011	0.112
93	6/7/2016 14:11	0.012	0.115
94	6/7/2016 14:12	0.012	0.115
95	6/7/2016 14:13	0.012	0.118
96	6/7/2016 14:14	0.012	0.119
97	6/7/2016 14:15	0.013	0.119
98	6/7/2016 14:16	0.013	0.122
99	6/7/2016 14:17	0.013	0.121
100	6/7/2016 14:18	0.013	0.123
101	6/7/2016 14:19	0.014	0.124
102	6/7/2016 14:20	0.014	0.125
103	6/7/2016 14:21	0.014	0.122
104	6/7/2016 14:22	0.014	0.122
105	6/7/2016 14:23	0.015	0.123
106	6/7/2016 14:24	0.015	0.124
107	6/7/2016 14:25	0.015	0.124
108	6/7/2016 14:26	0.015	0.124
109	6/7/2016 14:27	0.016	0.125
110	6/7/2016 14:28	0.016	0.127
111	6/7/2016 14:29	0.016	0.127
112	6/7/2016 14:30	0.017	0.128
113	6/7/2016 14:31	0.017	0.128

114	6/7/2016 14:32	0.017	0.132
115	6/7/2016 14:33	0.017	0.132
116	6/7/2016 14:34	0.018	0.133
117	6/7/2016 14:35	0.018	0.133
118	6/7/2016 14:36	0.018	0.133
119	6/7/2016 14:37	0.019	0.134
120	6/7/2016 14:38	0.019	0.134
121	6/7/2016 14:39	0.019	0.135
122	6/7/2016 14:40	0.019	0.135
123	6/7/2016 14:41	0.02	0.134
124	6/7/2016 14:42	0.02	0.133
125	6/7/2016 14:43	0.02	0.133
126	6/7/2016 14:44	0.02	0.133
127	6/7/2016 14:45	0.021	0.134
128	6/7/2016 14:46	0.021	0.134
129	6/7/2016 14:47	0.021	0.134
130	6/7/2016 14:48	0.022	0.136
131	6/7/2016 14:49	0.022	0.137
132	6/7/2016 14:50	0.022	0.138
133	6/7/2016 14:51	0.023	0.14
134	6/7/2016 14:52	0.023	0.139
135	6/7/2016 14:53	0.023	0.138
136	6/7/2016 14:54	0.023	0.138
137	6/7/2016 14:55	0.024	0.139
138	6/7/2016 14:56	0.024	0.142
139	6/7/2016 14:57	0.024	0.146
140	6/7/2016 14:58	0.025	0.146
141	6/7/2016 14:59	0.025	0.148
142	6/7/2016 15:00	0.025	0.152
143	6/7/2016 15:01	0.026	0.153
144	6/7/2016 15:02	0.026	0.154
145	6/7/2016 15:03	0.027	0.157
146	6/7/2016 15:04	0.027	0.158
147	6/7/2016 15:05	0.027	0.159
148	6/7/2016 15:06	0.028	0.16
149	6/7/2016 15:07	0.028	0.165
150	6/7/2016 15:08	0.028	0.168
151	6/7/2016 15:09	0.029	0.17
152	6/7/2016 15:10	0.029	0.17
153	6/7/2016 15:11	0.029	0.169
154	6/7/2016 15:12	0.03	0.168
155	6/7/2016 15:13	0.03	0.168
156	6/7/2016 15:14	0.03	0.164
157	6/7/2016 15:15	0.03	0.159
158	6/7/2016 15:16	0.031	0.159
159	6/7/2016 15:17	0.031	0.157
160	6/7/2016 15:18	0.031	0.153

161	6/7/2016 15:19	0.032	0.151
162	6/7/2016 15:20	0.032	0.15
163	6/7/2016 15:21	0.032	0.15
164	6/7/2016 15:22	0.033	0.145
165	6/7/2016 15:23	0.033	0.143
166	6/7/2016 15:24	0.033	0.141
167	6/7/2016 15:25	0.033	0.139
168	6/7/2016 15:26	0.034	0.14
169	6/7/2016 15:27	0.034	0.137
170	6/7/2016 15:28	0.034	0.137
171	6/7/2016 15:29	0.035	0.138
172	6/7/2016 15:30	0.035	0.137
173	6/7/2016 15:31	0.035	0.135
174	6/7/2016 15:32	0.035	0.134
175	6/7/2016 15:33	0.036	0.133
176	6/7/2016 15:34	0.036	0.132
177	6/7/2016 15:35	0.036	0.131
178	6/7/2016 15:36	0.036	0.127
179	6/7/2016 15:37	0.036	0.124
180	6/7/2016 15:38	0.037	0.123
181	6/7/2016 15:39	0.037	0.122
182	6/7/2016 15:40	0.037	0.121
183	6/7/2016 15:41	0.037	0.12
184	6/7/2016 15:42	0.038	0.119
185	6/7/2016 15:43	0.038	0.117
186	6/7/2016 15:44	0.038	0.115
187	6/7/2016 15:45	0.038	0.115
188	6/7/2016 15:46	0.039	0.115
189	6/7/2016 15:47	0.039	0.115
190	6/7/2016 15:48	0.039	0.115
191	6/7/2016 15:49	0.039	0.113
192	6/7/2016 15:50	0.04	0.111
193	6/7/2016 15:51	0.04	0.112
194	6/7/2016 15:52	0.04	0.113
195	6/7/2016 15:53	0.04	0.111
196	6/7/2016 15:54	0.04	0.11
197	6/7/2016 15:55	0.041	0.111
198	6/7/2016 15:56	0.041	0.11
199	6/7/2016 15:57	0.041	0.111
200	6/7/2016 15:58	0.041	0.112
201	6/7/2016 15:59	0.042	0.113
202	6/7/2016 16:00	0.042	0.111
203	6/7/2016 16:01	0.042	0.111
204	6/7/2016 16:02	0.042	0.108
205	6/7/2016 16:03	0.042	0.105
206	6/7/2016 16:04	0.043	0.104
207	6/7/2016 16:05	0.043	0.106

208	6/7/2016 16:06	0.043	0.106
209	6/7/2016 16:07	0.043	0.105
210	6/7/2016 16:08	0.043	0.105
211	6/7/2016 16:09	0.044	0.105
212	6/7/2016 16:10	0.044	0.105
213	6/7/2016 16:11	0.044	0.104
214	6/7/2016 16:12	0.044	0.102
215	6/7/2016 16:13	0.045	0.101

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16/06/08 09:06

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID 3
User ID 1

Begin 6/8/2016 9:06
End 6/8/2016 12:15
Sample Period(s) 60
Number of Records 189

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/8/2016 7:38
Peak 0.094
Min 0
Average 0.012

Datalog

VOC(ppm) VOC(ppm) VOC(ppm) VOC(ppm)

Index	Date/Time	(Min)	(Avg)	(Max)	(Real)
1	6/8/2016 9:07	0.003	0.015	0.041	0.005
2	6/8/2016 9:08	0	0.004	0.013	0.001
3	6/8/2016 9:09	0	0	0.004	0
4	6/8/2016 9:10	0	0.002	0.011	0.001
5	6/8/2016 9:11	0	0	0.003	0
6	6/8/2016 9:12	0	0	0	0
7	6/8/2016 9:13	0	0	0	0
8	6/8/2016 9:14	0	0	0.003	0
9	6/8/2016 9:15	0	0	0.001	0
10	6/8/2016 9:16	0	0	0.001	0
11	6/8/2016 9:17	0	0	0	0
12	6/8/2016 9:18	0	0	0	0
13	6/8/2016 9:19	0	0	0	0
14	6/8/2016 9:20	0	0	0	0
15	6/8/2016 9:21	0	0	0	0
16	6/8/2016 9:22	0	0	0	0
17	6/8/2016 9:23	0	0	0	0
18	6/8/2016 9:24	0	0	0.002	0
19	6/8/2016 9:25	0	0	0	0
20	6/8/2016 9:26	0	0	0.001	0.001
21	6/8/2016 9:27	0	0	0	0
22	6/8/2016 9:28	0	0	0	0
23	6/8/2016 9:29	0	0	0.005	0
24	6/8/2016 9:30	0	0	0.003	0
25	6/8/2016 9:31	0	0	0.004	0
26	6/8/2016 9:32	0	0	0.006	0
27	6/8/2016 9:33	0	0	0	0
28	6/8/2016 9:34	0	0	0	0
29	6/8/2016 9:35	0	0	0	0
30	6/8/2016 9:36	0	0	0	0
31	6/8/2016 9:37	0	0	0	0
32	6/8/2016 9:38	0	0	0	0
33	6/8/2016 9:39	0	0	0	0
34	6/8/2016 9:40	0	0	0	0
35	6/8/2016 9:41	0	0	0	0
36	6/8/2016 9:42	0	0	0	0
37	6/8/2016 9:43	0	0	0	0
38	6/8/2016 9:44	0	0	0	0
39	6/8/2016 9:45	0	0	0	0
40	6/8/2016 9:46	0	0	0	0
41	6/8/2016 9:47	0	0	0	0
42	6/8/2016 9:48	0	0	0	0

43	6/8/2016 9:49	0	0	0	0
44	6/8/2016 9:50	0	0	0	0
45	6/8/2016 9:51	0	0	0	0
46	6/8/2016 9:52	0	0	0	0
47	6/8/2016 9:53	0	0	0	0
48	6/8/2016 9:54	0	0	0	0
49	6/8/2016 9:55	0	0	0	0
50	6/8/2016 9:56	0	0	0	0
51	6/8/2016 9:57	0	0	0	0
52	6/8/2016 9:58	0	0	0	0
53	6/8/2016 9:59	0	0	0	0
54	6/8/2016 10:00	0	0	0	0
55	6/8/2016 10:01	0	0	0	0
56	6/8/2016 10:02	0	0	0	0
57	6/8/2016 10:03	0	0	0	0
58	6/8/2016 10:04	0	0	0	0
59	6/8/2016 10:05	0	0	0	0
60	6/8/2016 10:06	0	0	0	0
61	6/8/2016 10:07	0	0	0.001	0.001
62	6/8/2016 10:08	0	0.012	0.094	0.094
63	6/8/2016 10:09	0	0.011	0.089	0
64	6/8/2016 10:10	0	0	0	0
65	6/8/2016 10:11	0	0	0	0
66	6/8/2016 10:12	0	0	0	0
67	6/8/2016 10:13	0	0	0	0
68	6/8/2016 10:14	0	0.002	0.009	0.005
69	6/8/2016 10:15	0	0.001	0.006	0.003
70	6/8/2016 10:16	0	0.007	0.017	0.017
71	6/8/2016 10:17	0.004	0.011	0.02	0.02
72	6/8/2016 10:18	0.008	0.017	0.028	0.017
73	6/8/2016 10:19	0.012	0.018	0.024	0.021
74	6/8/2016 10:20	0.014	0.025	0.042	0.02
75	6/8/2016 10:21	0.017	0.022	0.028	0.025
76	6/8/2016 10:22	0.026	0.037	0.06	0.033
77	6/8/2016 10:23	0.024	0.029	0.035	0.031
78	6/8/2016 10:24	0.028	0.032	0.04	0.034
79	6/8/2016 10:25	0.033	0.036	0.042	0.036
80	6/8/2016 10:26	0.033	0.039	0.045	0.043
81	6/8/2016 10:27	0.042	0.046	0.052	0.047
82	6/8/2016 10:28	0.032	0.038	0.046	0.041
83	6/8/2016 10:29	0.041	0.045	0.052	0.045
84	6/8/2016 10:30	0.039	0.048	0.06	0.05
85	6/8/2016 10:31	0.037	0.043	0.05	0.037
86	6/8/2016 10:32	0.04	0.045	0.05	0.041
87	6/8/2016 10:33	0.04	0.046	0.055	0.042
88	6/8/2016 10:34	0.043	0.05	0.057	0.054
89	6/8/2016 10:35	0.043	0.046	0.053	0.049

90	6/8/2016 10:36	0.047	0.054	0.062	0.062
91	6/8/2016 10:37	0.045	0.052	0.062	0.046
92	6/8/2016 10:38	0.031	0.045	0.052	0.052
93	6/8/2016 10:39	0.033	0.044	0.055	0.05
94	6/8/2016 10:40	0.04	0.048	0.057	0.053
95	6/8/2016 10:41	0.051	0.055	0.064	0.053
96	6/8/2016 10:42	0.047	0.057	0.066	0.057
97	6/8/2016 10:43	0.054	0.059	0.066	0.063
98	6/8/2016 10:44	0.061	0.065	0.07	0.069
99	6/8/2016 10:45	0.067	0.073	0.082	0.073
100	6/8/2016 10:46	0.066	0.07	0.076	0.071
101	6/8/2016 10:47	0.065	0.072	0.083	0.069
102	6/8/2016 10:48	0.042	0.055	0.067	0.046
103	6/8/2016 10:49	0.042	0.055	0.067	0.058
104	6/8/2016 10:50	0.054	0.069	0.084	0.065
105	6/8/2016 10:51	0.042	0.063	0.071	0.042
106	6/8/2016 10:52	0.039	0.043	0.053	0.039
107	6/8/2016 10:53	0.038	0.05	0.062	0.054
108	6/8/2016 10:54	0.04	0.053	0.065	0.064
109	6/8/2016 10:55	0.047	0.064	0.081	0.047
110	6/8/2016 10:56	0.046	0.056	0.066	0.059
111	6/8/2016 10:57	0.035	0.051	0.06	0.039
112	6/8/2016 10:58	0.025	0.034	0.041	0.038
113	6/8/2016 10:59	0.037	0.04	0.046	0.043
114	6/8/2016 11:00	0.033	0.043	0.053	0.047
115	6/8/2016 11:01	0	0.037	0.051	0
116	6/8/2016 11:02	0	0.034	0.089	0.07
117	6/8/2016 11:03	0	0.018	0.083	0.01
118	6/8/2016 11:04	0	0.004	0.021	0.008
119	6/8/2016 11:05	0	0.003	0.015	0.009
120	6/8/2016 11:06	0	0.005	0.021	0.003
121	6/8/2016 11:07	0	0.008	0.043	0.015
122	6/8/2016 11:08	0	0.019	0.068	0.005
123	6/8/2016 11:09	0	0.007	0.049	0.014
124	6/8/2016 11:10	0	0.003	0.014	0.01
125	6/8/2016 11:11	0	0.005	0.015	0.007
126	6/8/2016 11:12	0	0.005	0.021	0.004
127	6/8/2016 11:13	0	0.002	0.011	0
128	6/8/2016 11:14	0	0	0.006	0.006
129	6/8/2016 11:15	0	0.005	0.02	0.002
130	6/8/2016 11:16	0	0	0.002	0
131	6/8/2016 11:17	0	0	0.007	0
132	6/8/2016 11:18	0	0	0	0
133	6/8/2016 11:19	0	0	0	0
134	6/8/2016 11:20	0	0	0.004	0
135	6/8/2016 11:21	0	0	0.003	0
136	6/8/2016 11:22	0	0	0.001	0

137	6/8/2016 11:23	0	0	0	0
138	6/8/2016 11:24	0	0	0	0
139	6/8/2016 11:25	0	0	0	0
140	6/8/2016 11:26	0	0	0	0
141	6/8/2016 11:27	0	0	0	0
142	6/8/2016 11:28	0	0	0	0
143	6/8/2016 11:29	0	0	0	0
144	6/8/2016 11:30	0	0	0	0
145	6/8/2016 11:31	0	0.009	0.056	0
146	6/8/2016 11:32	0	0	0	0
147	6/8/2016 11:33	0	0	0	0
148	6/8/2016 11:34	0	0	0	0
149	6/8/2016 11:35	0	0	0	0
150	6/8/2016 11:36	0	0	0	0
151	6/8/2016 11:37	0	0	0	0
152	6/8/2016 11:38	0	0	0	0
153	6/8/2016 11:39	0	0	0	0
154	6/8/2016 11:40	0	0	0	0
155	6/8/2016 11:41	0	0	0	0
156	6/8/2016 11:42	0	0.001	0.029	0
157	6/8/2016 11:43	0	0.013	0.048	0
158	6/8/2016 11:44	0	0	0	0
159	6/8/2016 11:45	0	0	0	0
160	6/8/2016 11:46	0	0	0	0
161	6/8/2016 11:47	0	0	0	0
162	6/8/2016 11:48	0	0	0	0
163	6/8/2016 11:49	0	0	0	0
164	6/8/2016 11:50	0	0	0	0
165	6/8/2016 11:51	0	0	0	0
166	6/8/2016 11:52	0	0	0	0
167	6/8/2016 11:53	0	0	0	0
168	6/8/2016 11:54	0	0	0	0
169	6/8/2016 11:55	0	0	0	0
170	6/8/2016 11:56	0	0	0	0
171	6/8/2016 11:57	0	0	0	0
172	6/8/2016 11:58	0	0	0	0
173	6/8/2016 11:59	0	0	0	0
174	6/8/2016 12:00	0	0.003	0.032	0
175	6/8/2016 12:01	0	0	0	0
176	6/8/2016 12:02	0	0	0	0
177	6/8/2016 12:03	0	0	0	0
178	6/8/2016 12:04	0	0	0	0
179	6/8/2016 12:05	0	0	0	0
180	6/8/2016 12:06	0	0	0	0
181	6/8/2016 12:07	0	0	0.001	0
182	6/8/2016 12:08	0	0	0	0
183	6/8/2016 12:09	0	0	0	0

184	6/8/2016 12:10	0	0	0	0
185	6/8/2016 12:11	0	0	0	0
186	6/8/2016 12:12	0	0	0.003	0
187	6/8/2016 12:13	0	0	0.003	0
188	6/8/2016 12:14	0	0	0	0
189	6/8/2016 12:15	0	0	0	0

Peak	0.067	0.073	0.094	0.094
Min	0	0	0	0
Average	0.009	0.012	0.018	0.012

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/8/2016 9:07	0	---
2	6/8/2016 9:08	0	---
3	6/8/2016 9:09	0	---
4	6/8/2016 9:10	0	---
5	6/8/2016 9:11	0	---
6	6/8/2016 9:12	0	---
7	6/8/2016 9:13	0	---
8	6/8/2016 9:14	0	---
9	6/8/2016 9:15	0	---
10	6/8/2016 9:16	0	---
11	6/8/2016 9:17	0	---
12	6/8/2016 9:18	0	---
13	6/8/2016 9:19	0	---
14	6/8/2016 9:20	0	---
15	6/8/2016 9:21	0	0
16	6/8/2016 9:22	0	0
17	6/8/2016 9:23	0	0
18	6/8/2016 9:24	0	0
19	6/8/2016 9:25	0	0
20	6/8/2016 9:26	0	0
21	6/8/2016 9:27	0	0
22	6/8/2016 9:28	0	0
23	6/8/2016 9:29	0	0
24	6/8/2016 9:30	0	0
25	6/8/2016 9:31	0	0
26	6/8/2016 9:32	0	0
27	6/8/2016 9:33	0	0
28	6/8/2016 9:34	0	0
29	6/8/2016 9:35	0	0
30	6/8/2016 9:36	0	0
31	6/8/2016 9:37	0	0

32	6/8/2016 9:38	0	0
33	6/8/2016 9:39	0	0
34	6/8/2016 9:40	0	0
35	6/8/2016 9:41	0	0
36	6/8/2016 9:42	0	0
37	6/8/2016 9:43	0	0
38	6/8/2016 9:44	0	0
39	6/8/2016 9:45	0	0
40	6/8/2016 9:46	0	0
41	6/8/2016 9:47	0	0
42	6/8/2016 9:48	0	0
43	6/8/2016 9:49	0	0
44	6/8/2016 9:50	0	0
45	6/8/2016 9:51	0	0
46	6/8/2016 9:52	0	0
47	6/8/2016 9:53	0	0
48	6/8/2016 9:54	0	0
49	6/8/2016 9:55	0	0
50	6/8/2016 9:56	0	0
51	6/8/2016 9:57	0	0
52	6/8/2016 9:58	0	0
53	6/8/2016 9:59	0	0
54	6/8/2016 10:00	0	0
55	6/8/2016 10:01	0	0
56	6/8/2016 10:02	0	0
57	6/8/2016 10:03	0	0
58	6/8/2016 10:04	0	0
59	6/8/2016 10:05	0	0
60	6/8/2016 10:06	0	0
61	6/8/2016 10:07	0	0
62	6/8/2016 10:08	0	0.006
63	6/8/2016 10:09	0	0.006
64	6/8/2016 10:10	0	0.006
65	6/8/2016 10:11	0	0.006
66	6/8/2016 10:12	0	0.006
67	6/8/2016 10:13	0	0.006
68	6/8/2016 10:14	0	0.007
69	6/8/2016 10:15	0	0.007
70	6/8/2016 10:16	0	0.008
71	6/8/2016 10:17	0	0.009
72	6/8/2016 10:18	0	0.01
73	6/8/2016 10:19	0	0.012
74	6/8/2016 10:20	0	0.013
75	6/8/2016 10:21	0	0.015
76	6/8/2016 10:22	0.001	0.017
77	6/8/2016 10:23	0.001	0.013
78	6/8/2016 10:24	0.001	0.015

79	6/8/2016 10:25	0.001	0.017
80	6/8/2016 10:26	0.001	0.02
81	6/8/2016 10:27	0.001	0.023
82	6/8/2016 10:28	0.001	0.026
83	6/8/2016 10:29	0.001	0.029
84	6/8/2016 10:30	0.001	0.032
85	6/8/2016 10:31	0.001	0.033
86	6/8/2016 10:32	0.001	0.035
87	6/8/2016 10:33	0.001	0.036
88	6/8/2016 10:34	0.002	0.039
89	6/8/2016 10:35	0.002	0.041
90	6/8/2016 10:36	0.002	0.043
91	6/8/2016 10:37	0.002	0.044
92	6/8/2016 10:38	0.002	0.045
93	6/8/2016 10:39	0.002	0.046
94	6/8/2016 10:40	0.002	0.047
95	6/8/2016 10:41	0.002	0.048
96	6/8/2016 10:42	0.002	0.049
97	6/8/2016 10:43	0.003	0.05
98	6/8/2016 10:44	0.003	0.052
99	6/8/2016 10:45	0.003	0.053
100	6/8/2016 10:46	0.003	0.056
101	6/8/2016 10:47	0.003	0.058
102	6/8/2016 10:48	0.003	0.058
103	6/8/2016 10:49	0.003	0.058
104	6/8/2016 10:50	0.004	0.059
105	6/8/2016 10:51	0.004	0.058
106	6/8/2016 10:52	0.004	0.057
107	6/8/2016 10:53	0.004	0.057
108	6/8/2016 10:54	0.004	0.058
109	6/8/2016 10:55	0.004	0.058
110	6/8/2016 10:56	0.004	0.058
111	6/8/2016 10:57	0.004	0.057
112	6/8/2016 10:58	0.004	0.056
113	6/8/2016 10:59	0.004	0.054
114	6/8/2016 11:00	0.005	0.052
115	6/8/2016 11:01	0.005	0.047
116	6/8/2016 11:02	0.005	0.047
117	6/8/2016 11:03	0.005	0.045
118	6/8/2016 11:04	0.005	0.042
119	6/8/2016 11:05	0.005	0.038
120	6/8/2016 11:06	0.005	0.035
121	6/8/2016 11:07	0.005	0.034
122	6/8/2016 11:08	0.005	0.03
123	6/8/2016 11:09	0.005	0.027
124	6/8/2016 11:10	0.005	0.025
125	6/8/2016 11:11	0.005	0.021

126	6/8/2016 11:12	0.005	0.019
127	6/8/2016 11:13	0.005	0.016
128	6/8/2016 11:14	0.005	0.014
129	6/8/2016 11:15	0.005	0.011
130	6/8/2016 11:16	0.005	0.011
131	6/8/2016 11:17	0.005	0.006
132	6/8/2016 11:18	0.005	0.006
133	6/8/2016 11:19	0.005	0.005
134	6/8/2016 11:20	0.005	0.004
135	6/8/2016 11:21	0.005	0.004
136	6/8/2016 11:22	0.005	0.003
137	6/8/2016 11:23	0.005	0.003
138	6/8/2016 11:24	0.005	0.002
139	6/8/2016 11:25	0.005	0.001
140	6/8/2016 11:26	0.005	0.001
141	6/8/2016 11:27	0.005	0.001
142	6/8/2016 11:28	0.005	0.001
143	6/8/2016 11:29	0.005	0
144	6/8/2016 11:30	0.005	0
145	6/8/2016 11:31	0.005	0
146	6/8/2016 11:32	0.005	0
147	6/8/2016 11:33	0.005	0
148	6/8/2016 11:34	0.005	0
149	6/8/2016 11:35	0.005	0
150	6/8/2016 11:36	0.005	0
151	6/8/2016 11:37	0.005	0
152	6/8/2016 11:38	0.005	0
153	6/8/2016 11:39	0.005	0
154	6/8/2016 11:40	0.005	0
155	6/8/2016 11:41	0.005	0
156	6/8/2016 11:42	0.005	0
157	6/8/2016 11:43	0.005	0
158	6/8/2016 11:44	0.005	0
159	6/8/2016 11:45	0.005	0
160	6/8/2016 11:46	0.005	0
161	6/8/2016 11:47	0.005	0
162	6/8/2016 11:48	0.005	0
163	6/8/2016 11:49	0.005	0
164	6/8/2016 11:50	0.005	0
165	6/8/2016 11:51	0.005	0
166	6/8/2016 11:52	0.005	0
167	6/8/2016 11:53	0.005	0
168	6/8/2016 11:54	0.005	0
169	6/8/2016 11:55	0.005	0
170	6/8/2016 11:56	0.005	0
171	6/8/2016 11:57	0.005	0
172	6/8/2016 11:58	0.005	0

173	6/8/2016 11:59	0.005	0
174	6/8/2016 12:00	0.005	0
175	6/8/2016 12:01	0.005	0
176	6/8/2016 12:02	0.005	0
177	6/8/2016 12:03	0.005	0
178	6/8/2016 12:04	0.005	0
179	6/8/2016 12:05	0.005	0
180	6/8/2016 12:06	0.005	0
181	6/8/2016 12:07	0.005	0
182	6/8/2016 12:08	0.005	0
183	6/8/2016 12:09	0.005	0
184	6/8/2016 12:10	0.005	0
185	6/8/2016 12:11	0.005	0
186	6/8/2016 12:12	0.005	0
187	6/8/2016 12:13	0.005	0
188	6/8/2016 12:14	0.005	0
189	6/8/2016 12:15	0.005	0

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16/06/10 14:53

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 6
User ID 1

Begin 6/10/2016 14:53
End 6/10/2016 14:54
Sample Period(s) 60
Number of Records 0

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50

High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/10/2016 7:48

Datalog

0 record.

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16/06/10 14:54

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 7
User ID 1

Begin 6/10/2016 14:54
End 6/10/2016 15:32
Sample Period(s) 60
Number of Records 38

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/10/2016 7:48
Peak 0.099

Min 0.015
 Average 0.068

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/10/2016 14:55	0	0.012	0.022	0.015
2	6/10/2016 14:56	0.016	0.025	0.032	0.021
3	6/10/2016 14:57	0.015	0.023	0.033	0.019
4	6/10/2016 14:58	0.019	0.032	0.04	0.036
5	6/10/2016 14:59	0.031	0.048	0.063	0.059
6	6/10/2016 15:00	0.044	0.054	0.067	0.046
7	6/10/2016 15:01	0.044	0.056	0.068	0.068
8	6/10/2016 15:02	0.062	0.068	0.076	0.07
9	6/10/2016 15:03	0.046	0.052	0.066	0.048
10	6/10/2016 15:04	0.043	0.047	0.052	0.048
11	6/10/2016 15:05	0.042	0.053	0.071	0.071
12	6/10/2016 15:06	0.061	0.071	0.076	0.061
13	6/10/2016 15:07	0.057	0.065	0.081	0.08
14	6/10/2016 15:08	0.056	0.069	0.08	0.069
15	6/10/2016 15:09	0.055	0.072	0.087	0.071
16	6/10/2016 15:10	0.064	0.07	0.085	0.085
17	6/10/2016 15:11	0.058	0.072	0.087	0.062
18	6/10/2016 15:12	0.056	0.061	0.068	0.06
19	6/10/2016 15:13	0.06	0.067	0.077	0.072
20	6/10/2016 15:14	0.066	0.08	0.091	0.08
21	6/10/2016 15:15	0.072	0.088	0.107	0.093
22	6/10/2016 15:16	0.065	0.075	0.09	0.068
23	6/10/2016 15:17	0.061	0.073	0.09	0.09
24	6/10/2016 15:18	0.078	0.093	0.103	0.078
25	6/10/2016 15:19	0.06	0.068	0.076	0.063
26	6/10/2016 15:20	0.06	0.066	0.078	0.072
27	6/10/2016 15:21	0.071	0.08	0.088	0.088
28	6/10/2016 15:22	0.065	0.073	0.09	0.069
29	6/10/2016 15:23	0.065	0.07	0.081	0.081
30	6/10/2016 15:24	0.069	0.079	0.085	0.083
31	6/10/2016 15:25	0.07	0.082	0.094	0.075
32	6/10/2016 15:26	0.071	0.079	0.089	0.084
33	6/10/2016 15:27	0.078	0.088	0.099	0.099
34	6/10/2016 15:28	0.071	0.084	0.1	0.071
35	6/10/2016 15:29	0.067	0.09	0.201	0.079
36	6/10/2016 15:30	0.061	0.067	0.079	0.064
37	6/10/2016 15:31	0.064	0.083	0.098	0.097
38	6/10/2016 15:32	0.073	0.09	0.101	0.073

Peak	0.078	0.093	0.201	0.099
Min	0	0.012	0.022	0.015
Average	0.056	0.066	0.081	0.068

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/10/2016 14:55	0	---
2	6/10/2016 14:56	0	---
3	6/10/2016 14:57	0	---
4	6/10/2016 14:58	0	---
5	6/10/2016 14:59	0	---
6	6/10/2016 15:00	0	---
7	6/10/2016 15:01	0.001	---
8	6/10/2016 15:02	0.001	---
9	6/10/2016 15:03	0.001	---
10	6/10/2016 15:04	0.001	---
11	6/10/2016 15:05	0.001	---
12	6/10/2016 15:06	0.001	---
13	6/10/2016 15:07	0.001	---
14	6/10/2016 15:08	0.001	---
15	6/10/2016 15:09	0.002	0.052
16	6/10/2016 15:10	0.002	0.057
17	6/10/2016 15:11	0.002	0.06
18	6/10/2016 15:12	0.002	0.062
19	6/10/2016 15:13	0.002	0.065
20	6/10/2016 15:14	0.002	0.066
21	6/10/2016 15:15	0.003	0.069
22	6/10/2016 15:16	0.003	0.069
23	6/10/2016 15:17	0.003	0.071
24	6/10/2016 15:18	0.003	0.073
25	6/10/2016 15:19	0.003	0.074
26	6/10/2016 15:20	0.003	0.074
27	6/10/2016 15:21	0.004	0.075
28	6/10/2016 15:22	0.004	0.075
29	6/10/2016 15:23	0.004	0.075
30	6/10/2016 15:24	0.004	0.076
31	6/10/2016 15:25	0.004	0.076
32	6/10/2016 15:26	0.004	0.077
33	6/10/2016 15:27	0.005	0.08
34	6/10/2016 15:28	0.005	0.08
35	6/10/2016 15:29	0.005	0.08
36	6/10/2016 15:30	0.005	0.078

37	6/10/2016 15:31	0.005	0.08
38	6/10/2016 15:32	0.005	0.078

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16/06/12 13:39

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID 13
User ID 1

Begin 6/12/2016 13:39
End 6/12/2016 13:40
Sample Period(s) 60
Number of Records 0

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/12/2016 7:51

Datalog

0 record.

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16/06/13 08:14

Summary

 Unit Name MiniRAE 3000(PGM-7320)
 Unit SN 592-905808
 Unit Firmware Ver V1.10A

Running Mode Search Mode
 Measure Type Min; Avg; Max; Real
 Datalog Mode Continuous
 Datalog Type Manual
 Diagnostic Mode No
 Stop Reason Stop by User

Site ID 16
 User ID 1

Begin 6/13/2016 8:14
 End 6/13/2016 8:43
 Sample Period(s) 60
 Number of Records 28

Sensor VOC(ppm)
 Span 100
 Span 2 N/A
 Low Alarm 50
 High Alarm 100
 Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/13/2016 7:19
 Peak 0.105
 Min 0
 Average 0.041

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/13/2016 8:15	0	0.051	0.127	0.046
2	6/13/2016 8:16	0	0.013	0.066	0.009
3	6/13/2016 8:17	0	0.028	0.071	0.071
4	6/13/2016 8:18	0	0.042	0.12	0
5	6/13/2016 8:19	0	0.018	0.049	0.013
6	6/13/2016 8:20	0.006	0.032	0.073	0.048
7	6/13/2016 8:21	0.006	0.023	0.049	0.049
8	6/13/2016 8:22	0.024	0.063	0.103	0.029

9	6/13/2016 8:23	0	0.026	0.073	0.014
10	6/13/2016 8:24	0.008	0.042	0.101	0.038
11	6/13/2016 8:25	0.001	0.036	0.079	0.044
12	6/13/2016 8:26	0.001	0.041	0.099	0.067
13	6/13/2016 8:27	0.001	0.041	0.126	0.051
14	6/13/2016 8:28	0	0.027	0.06	0.032
15	6/13/2016 8:29	0.018	0.064	0.135	0.033
16	6/13/2016 8:30	0.001	0.024	0.077	0.077
17	6/13/2016 8:31	0.014	0.069	0.118	0.083
18	6/13/2016 8:32	0.022	0.07	0.105	0.105
19	6/13/2016 8:33	0.014	0.049	0.106	0.038
20	6/13/2016 8:34	0	0.053	0.13	0.04
21	6/13/2016 8:35	0	0.016	0.048	0.015
22	6/13/2016 8:36	0	0.032	0.071	0.015
23	6/13/2016 8:37	0	0.037	0.099	0.023
24	6/13/2016 8:38	0.012	0.034	0.064	0.018
25	6/13/2016 8:39	0	0.031	0.067	0
26	6/13/2016 8:40	0	0.033	0.094	0.094
27	6/13/2016 8:41	0.012	0.068	0.128	0.039
28	6/13/2016 8:42	0.01	0.062	0.101	0.067

Peak	0.024	0.07	0.135	0.105
Min	0	0.013	0.048	0
Average	0.005	0.04	0.091	0.041

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/13/2016 8:15	0	---
2	6/13/2016 8:16	0	---
3	6/13/2016 8:17	0	---
4	6/13/2016 8:18	0	---
5	6/13/2016 8:19	0	---
6	6/13/2016 8:20	0	---
7	6/13/2016 8:21	0	---
8	6/13/2016 8:22	0.001	---
9	6/13/2016 8:23	0.001	---
10	6/13/2016 8:24	0.001	---
11	6/13/2016 8:25	0.001	---
12	6/13/2016 8:26	0.001	---
13	6/13/2016 8:27	0.001	---
14	6/13/2016 8:28	0.001	---

15	6/13/2016 8:29	0.001	0.036
16	6/13/2016 8:30	0.001	0.038
17	6/13/2016 8:31	0.001	0.043
18	6/13/2016 8:32	0.002	0.046
19	6/13/2016 8:33	0.002	0.048
20	6/13/2016 8:34	0.002	0.05
21	6/13/2016 8:35	0.002	0.048
22	6/13/2016 8:36	0.002	0.045
23	6/13/2016 8:37	0.002	0.045
24	6/13/2016 8:38	0.002	0.045
25	6/13/2016 8:39	0.002	0.043
26	6/13/2016 8:40	0.002	0.046
27	6/13/2016 8:41	0.002	0.044
28	6/13/2016 8:42	0.002	0.045

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16/06/13 09:01

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 17
User ID 1

Begin 6/13/2016 9:01
End 6/13/2016 13:07
Sample Period(s) 60
Number of Records 246

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25

TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/13/2016 7:19
 Peak 0.102
 Min 0
 Average 0.004

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/13/2016 9:02	0	0	0	0
2	6/13/2016 9:03	0	0.045	0.208	0.054
3	6/13/2016 9:04	0	0.02	0.134	0
4	6/13/2016 9:05	0	0.024	0.139	0
5	6/13/2016 9:06	0	0.003	0.027	0
6	6/13/2016 9:07	0	0	0.002	0.002
7	6/13/2016 9:08	0	0.001	0.011	0.005
8	6/13/2016 9:09	0	0.029	0.345	0
9	6/13/2016 9:10	0	0.001	0.014	0
10	6/13/2016 9:11	0	0	0.006	0
11	6/13/2016 9:12	0	0.005	0.045	0
12	6/13/2016 9:13	0	0.013	0.057	0.005
13	6/13/2016 9:14	0	0.027	0.104	0
14	6/13/2016 9:15	0	0	0	0
15	6/13/2016 9:16	0	0.001	0.018	0
16	6/13/2016 9:17	0	0.012	0.069	0
17	6/13/2016 9:18	0	0	0	0
18	6/13/2016 9:19	0	0	0.006	0
19	6/13/2016 9:20	0	0.003	0.023	0.018
20	6/13/2016 9:21	0	0	0.012	0
21	6/13/2016 9:22	0	0.014	0.071	0
22	6/13/2016 9:23	0	0	0.005	0
23	6/13/2016 9:24	0	0.002	0.013	0
24	6/13/2016 9:25	0	0.008	0.041	0
25	6/13/2016 9:26	0	0	0	0
26	6/13/2016 9:27	0	0	0	0
27	6/13/2016 9:28	0	0	0	0
28	6/13/2016 9:29	0	0	0	0
29	6/13/2016 9:30	0	0.001	0.01	0.004
30	6/13/2016 9:31	0	0	0	0
31	6/13/2016 9:32	0	0	0	0
32	6/13/2016 9:33	0	0	0	0
33	6/13/2016 9:34	0	0	0	0

34	6/13/2016 9:35	0	0	0	0
35	6/13/2016 9:36	0	0	0	0
36	6/13/2016 9:37	0	0	0	0
37	6/13/2016 9:38	0	0	0	0
38	6/13/2016 9:39	0	0	0	0
39	6/13/2016 9:40	0	0	0	0
40	6/13/2016 9:41	0	0.001	0.017	0
41	6/13/2016 9:42	0	0	0	0
42	6/13/2016 9:43	0	0	0	0
43	6/13/2016 9:44	0	0	0	0
44	6/13/2016 9:45	0	0	0	0
45	6/13/2016 9:46	0	0	0	0
46	6/13/2016 9:47	0	0.002	0.02	0
47	6/13/2016 9:48	0	0	0.001	0
48	6/13/2016 9:49	0	0	0.006	0
49	6/13/2016 9:50	0	0	0.014	0.014
50	6/13/2016 9:51	0	0	0.014	0
51	6/13/2016 9:52	0	0	0	0
52	6/13/2016 9:53	0	0	0	0
53	6/13/2016 9:54	0	0	0.006	0
54	6/13/2016 9:55	0	0	0	0
55	6/13/2016 9:56	0	0	0	0
56	6/13/2016 9:57	0	0	0	0
57	6/13/2016 9:58	0	0.006	0.052	0
58	6/13/2016 9:59	0	0	0	0
59	6/13/2016 10:00	0	0	0	0
60	6/13/2016 10:01	0	0.002	0.033	0
61	6/13/2016 10:02	0	0	0	0
62	6/13/2016 10:03	0	0	0.008	0
63	6/13/2016 10:04	0	0	0	0
64	6/13/2016 10:05	0	0.006	0.044	0
65	6/13/2016 10:06	0	0	0.003	0
66	6/13/2016 10:07	0	0	0	0
67	6/13/2016 10:08	0	0	0.001	0
68	6/13/2016 10:09	0	0	0	0
69	6/13/2016 10:10	0	0	0	0
70	6/13/2016 10:11	0	0.005	0.024	0.015
71	6/13/2016 10:12	0	0.018	0.052	0
72	6/13/2016 10:13	0	0.002	0.024	0
73	6/13/2016 10:14	0	0	0.007	0
74	6/13/2016 10:15	0	0	0	0
75	6/13/2016 10:16	0	0	0.008	0
76	6/13/2016 10:17	0	0	0	0
77	6/13/2016 10:18	0	0.001	0.011	0.002
78	6/13/2016 10:19	0	0	0.01	0
79	6/13/2016 10:20	0	0	0	0
80	6/13/2016 10:21	0	0.004	0.028	0.025

81	6/13/2016 10:22	0	0.003	0.029	0
82	6/13/2016 10:23	0	0	0	0
83	6/13/2016 10:24	0	0	0	0
84	6/13/2016 10:25	0	0	0.01	0.008
85	6/13/2016 10:26	0	0	0.009	0
86	6/13/2016 10:27	0	0	0.002	0
87	6/13/2016 10:28	0	0	0.011	0.001
88	6/13/2016 10:29	0	0.001	0.01	0
89	6/13/2016 10:30	0	0	0	0
90	6/13/2016 10:31	0	0	0	0
91	6/13/2016 10:32	0	0.006	0.047	0
92	6/13/2016 10:33	0	0	0.007	0
93	6/13/2016 10:34	0	0	0.001	0
94	6/13/2016 10:35	0	0	0.006	0
95	6/13/2016 10:36	0	0	0	0
96	6/13/2016 10:37	0	0	0	0
97	6/13/2016 10:38	0	0	0.012	0
98	6/13/2016 10:39	0	0	0.001	0
99	6/13/2016 10:40	0	0	0	0
100	6/13/2016 10:41	0	0	0	0
101	6/13/2016 10:42	0	0	0	0
102	6/13/2016 10:43	0	0	0.004	0
103	6/13/2016 10:44	0	0	0	0
104	6/13/2016 10:45	0	0.001	0.02	0
105	6/13/2016 10:46	0	0	0.005	0
106	6/13/2016 10:47	0	0	0	0
107	6/13/2016 10:48	0	0	0	0
108	6/13/2016 10:49	0	0	0.001	0
109	6/13/2016 10:50	0	0	0	0
110	6/13/2016 10:51	0	0	0	0
111	6/13/2016 10:52	0	0	0	0
112	6/13/2016 10:53	0	0	0.001	0
113	6/13/2016 10:54	0	0	0	0
114	6/13/2016 10:55	0	0.001	0.022	0
115	6/13/2016 10:56	0	0	0	0
116	6/13/2016 10:57	0	0.002	0.022	0
117	6/13/2016 10:58	0	0	0.001	0
118	6/13/2016 10:59	0	0.001	0.009	0
119	6/13/2016 11:00	0	0	0	0
120	6/13/2016 11:01	0	0.004	0.02	0.002
121	6/13/2016 11:02	0	0	0.005	0
122	6/13/2016 11:03	0	0	0	0
123	6/13/2016 11:04	0	0	0	0
124	6/13/2016 11:05	0	0	0	0
125	6/13/2016 11:06	0	0	0	0
126	6/13/2016 11:07	0	0	0	0
127	6/13/2016 11:08	0	0	0.002	0

128	6/13/2016 11:09	0	0	0.002	0
129	6/13/2016 11:10	0	0	0	0
130	6/13/2016 11:11	0	0	0	0
131	6/13/2016 11:12	0	0	0.003	0
132	6/13/2016 11:13	0	0	0	0
133	6/13/2016 11:14	0	0	0	0
134	6/13/2016 11:15	0	0	0	0
135	6/13/2016 11:16	0	0	0	0
136	6/13/2016 11:17	0	0	0	0
137	6/13/2016 11:18	0	0.002	0.031	0
138	6/13/2016 11:19	0	0.001	0.013	0
139	6/13/2016 11:20	0	0.002	0.03	0
140	6/13/2016 11:21	0	0	0.01	0
141	6/13/2016 11:22	0	0	0.001	0
142	6/13/2016 11:23	0	0	0	0
143	6/13/2016 11:24	0	0	0.001	0
144	6/13/2016 11:25	0	0	0.005	0
145	6/13/2016 11:26	0	0	0	0
146	6/13/2016 11:27	0	0	0	0
147	6/13/2016 11:28	0	0.001	0.017	0
148	6/13/2016 11:29	0	0	0.006	0.006
149	6/13/2016 11:30	0	0	0.006	0
150	6/13/2016 11:31	0	0	0	0
151	6/13/2016 11:32	0	0	0.002	0.002
152	6/13/2016 11:33	0	0	0.012	0.012
153	6/13/2016 11:34	0	0.002	0.027	0.027
154	6/13/2016 11:35	0	0	0.02	0
155	6/13/2016 11:36	0	0	0.001	0.001
156	6/13/2016 11:37	0	0.011	0.035	0.012
157	6/13/2016 11:38	0	0.003	0.023	0.016
158	6/13/2016 11:39	0	0.003	0.033	0.01
159	6/13/2016 11:40	0	0.008	0.023	0
160	6/13/2016 11:41	0	0.001	0.015	0
161	6/13/2016 11:42	0	0	0	0
162	6/13/2016 11:43	0	0	0.002	0
163	6/13/2016 11:44	0	0.008	0.043	0.003
164	6/13/2016 11:45	0	0.005	0.047	0
165	6/13/2016 11:46	0	0	0	0
166	6/13/2016 11:47	0	0	0	0
167	6/13/2016 11:48	0	0	0.004	0
168	6/13/2016 11:49	0	0	0	0
169	6/13/2016 11:50	0	0	0	0
170	6/13/2016 11:51	0	0	0.008	0
171	6/13/2016 11:52	0	0	0	0
172	6/13/2016 11:53	0	0.001	0.024	0
173	6/13/2016 11:54	0	0	0.01	0
174	6/13/2016 11:55	0	0.001	0.006	0

175	6/13/2016 11:56	0	0	0	0
176	6/13/2016 11:57	0	0	0	0
177	6/13/2016 11:58	0	0	0	0
178	6/13/2016 11:59	0	0	0.004	0
179	6/13/2016 12:00	0	0.001	0.024	0
180	6/13/2016 12:01	0	0	0	0
181	6/13/2016 12:02	0	0	0.004	0
182	6/13/2016 12:03	0	0	0	0
183	6/13/2016 12:04	0	0	0.008	0
184	6/13/2016 12:05	0	0	0.001	0
185	6/13/2016 12:06	0	0	0	0
186	6/13/2016 12:07	0	0	0.001	0
187	6/13/2016 12:08	0	0.001	0.009	0.003
188	6/13/2016 12:09	0.001	0.009	0.03	0.001
189	6/13/2016 12:10	0.002	0.013	0.031	0.005
190	6/13/2016 12:11	0	0.012	0.035	0.01
191	6/13/2016 12:12	0	0.005	0.022	0.01
192	6/13/2016 12:13	0	0.004	0.017	0.01
193	6/13/2016 12:14	0	0.004	0.017	0
194	6/13/2016 12:15	0	0	0	0
195	6/13/2016 12:16	0	0.006	0.036	0.033
196	6/13/2016 12:17	0	0.004	0.03	0
197	6/13/2016 12:18	0	0.005	0.061	0
198	6/13/2016 12:19	0	0.006	0.052	0
199	6/13/2016 12:20	0	0	0.004	0
200	6/13/2016 12:21	0	0.004	0.042	0.042
201	6/13/2016 12:22	0	0.019	0.057	0
202	6/13/2016 12:23	0	0	0	0
203	6/13/2016 12:24	0	0.001	0.009	0
204	6/13/2016 12:25	0	0.006	0.04	0.019
205	6/13/2016 12:26	0	0.004	0.026	0
206	6/13/2016 12:27	0	0.01	0.041	0
207	6/13/2016 12:28	0	0.001	0.014	0
208	6/13/2016 12:29	0	0.002	0.023	0.004
209	6/13/2016 12:30	0	0.011	0.027	0
210	6/13/2016 12:31	0	0	0.004	0
211	6/13/2016 12:32	0	0	0.012	0
212	6/13/2016 12:33	0	0	0	0
213	6/13/2016 12:34	0	0.004	0.013	0.002
214	6/13/2016 12:35	0	0.006	0.027	0.005
215	6/13/2016 12:36	0	0.019	0.056	0.031
216	6/13/2016 12:37	0	0.017	0.046	0.022
217	6/13/2016 12:38	0	0.011	0.033	0.017
218	6/13/2016 12:39	0	0.004	0.049	0.001
219	6/13/2016 12:40	0	0.005	0.032	0.002
220	6/13/2016 12:41	0	0.001	0.008	0
221	6/13/2016 12:42	0	0.006	0.033	0.006

222	6/13/2016 12:43	0	0.015	0.054	0.054
223	6/13/2016 12:44	0	0.003	0.054	0
224	6/13/2016 12:45	0	0	0	0
225	6/13/2016 12:46	0	0	0.001	0
226	6/13/2016 12:47	0	0.001	0.011	0
227	6/13/2016 12:48	0	0	0.005	0.004
228	6/13/2016 12:49	0	0.003	0.019	0
229	6/13/2016 12:50	0	0	0.001	0
230	6/13/2016 12:51	0	0.004	0.042	0
231	6/13/2016 12:52	0	0	0	0
232	6/13/2016 12:53	0	0.004	0.036	0.014
233	6/13/2016 12:54	0	0.009	0.028	0.023
234	6/13/2016 12:55	0	0.008	0.037	0
235	6/13/2016 12:56	0	0.009	0.048	0
236	6/13/2016 12:57	0	0.015	0.032	0.017
237	6/13/2016 12:58	0.016	0.032	0.06	0.021
238	6/13/2016 12:59	0.017	0.032	0.051	0.051
239	6/13/2016 13:00	0.018	0.04	0.064	0.062
240	6/13/2016 13:01	0.015	0.041	0.075	0.028
241	6/13/2016 13:02	0	0.033	0.08	0.001
242	6/13/2016 13:03	0	0.012	0.024	0
243	6/13/2016 13:04	0	0.01	0.048	0.048
244	6/13/2016 13:05	0.002	0.034	0.065	0.053
245	6/13/2016 13:06	0.002	0.036	0.057	0.054
246	6/13/2016 13:07	0.04	0.074	0.102	0.102

Peak	0.04	0.074	0.345	0.102
Min	0	0	0	0
Average	0	0.004	0.018	0.004

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/13/2016 9:02	0	---
2	6/13/2016 9:03	0	---
3	6/13/2016 9:04	0	---
4	6/13/2016 9:05	0	---
5	6/13/2016 9:06	0	---
6	6/13/2016 9:07	0	---
7	6/13/2016 9:08	0	---
8	6/13/2016 9:09	0	---
9	6/13/2016 9:10	0	---
10	6/13/2016 9:11	0	---
11	6/13/2016 9:12	0	---
12	6/13/2016 9:13	0	---

13	6/13/2016 9:14	0	---
14	6/13/2016 9:15	0	---
15	6/13/2016 9:16	0	0.004
16	6/13/2016 9:17	0	0.004
17	6/13/2016 9:18	0	0.001
18	6/13/2016 9:19	0	0.001
19	6/13/2016 9:20	0	0.002
20	6/13/2016 9:21	0	0.002
21	6/13/2016 9:22	0	0.002
22	6/13/2016 9:23	0	0.002
23	6/13/2016 9:24	0	0.002
24	6/13/2016 9:25	0	0.002
25	6/13/2016 9:26	0	0.002
26	6/13/2016 9:27	0	0.002
27	6/13/2016 9:28	0	0.001
28	6/13/2016 9:29	0	0.001
29	6/13/2016 9:30	0	0.001
30	6/13/2016 9:31	0	0.001
31	6/13/2016 9:32	0	0.001
32	6/13/2016 9:33	0	0.001
33	6/13/2016 9:34	0	0.001
34	6/13/2016 9:35	0	0
35	6/13/2016 9:36	0	0
36	6/13/2016 9:37	0	0
37	6/13/2016 9:38	0	0
38	6/13/2016 9:39	0	0
39	6/13/2016 9:40	0	0
40	6/13/2016 9:41	0	0
41	6/13/2016 9:42	0	0
42	6/13/2016 9:43	0	0
43	6/13/2016 9:44	0	0
44	6/13/2016 9:45	0	0
45	6/13/2016 9:46	0	0
46	6/13/2016 9:47	0	0
47	6/13/2016 9:48	0	0
48	6/13/2016 9:49	0	0
49	6/13/2016 9:50	0	0.001
50	6/13/2016 9:51	0	0.001
51	6/13/2016 9:52	0	0.001
52	6/13/2016 9:53	0	0.001
53	6/13/2016 9:54	0	0.001
54	6/13/2016 9:55	0	0.001
55	6/13/2016 9:56	0	0.001
56	6/13/2016 9:57	0	0.001
57	6/13/2016 9:58	0	0.001
58	6/13/2016 9:59	0	0.001
59	6/13/2016 10:00	0	0.001

60	6/13/2016 10:01	0	0.001
61	6/13/2016 10:02	0	0.001
62	6/13/2016 10:03	0	0.001
63	6/13/2016 10:04	0	0.001
64	6/13/2016 10:05	0	0
65	6/13/2016 10:06	0	0
66	6/13/2016 10:07	0	0
67	6/13/2016 10:08	0	0
68	6/13/2016 10:09	0	0
69	6/13/2016 10:10	0	0
70	6/13/2016 10:11	0	0.001
71	6/13/2016 10:12	0	0.001
72	6/13/2016 10:13	0	0.001
73	6/13/2016 10:14	0	0.001
74	6/13/2016 10:15	0	0.001
75	6/13/2016 10:16	0	0.001
76	6/13/2016 10:17	0	0.001
77	6/13/2016 10:18	0	0.001
78	6/13/2016 10:19	0	0.001
79	6/13/2016 10:20	0	0.001
80	6/13/2016 10:21	0	0.003
81	6/13/2016 10:22	0	0.003
82	6/13/2016 10:23	0	0.003
83	6/13/2016 10:24	0	0.003
84	6/13/2016 10:25	0	0.003
85	6/13/2016 10:26	0	0.002
86	6/13/2016 10:27	0	0.002
87	6/13/2016 10:28	0	0.002
88	6/13/2016 10:29	0	0.002
89	6/13/2016 10:30	0	0.002
90	6/13/2016 10:31	0	0.002
91	6/13/2016 10:32	0	0.002
92	6/13/2016 10:33	0	0.002
93	6/13/2016 10:34	0	0.002
94	6/13/2016 10:35	0	0.002
95	6/13/2016 10:36	0	0.001
96	6/13/2016 10:37	0	0.001
97	6/13/2016 10:38	0	0.001
98	6/13/2016 10:39	0	0.001
99	6/13/2016 10:40	0	0
100	6/13/2016 10:41	0	0
101	6/13/2016 10:42	0	0
102	6/13/2016 10:43	0	0
103	6/13/2016 10:44	0	0
104	6/13/2016 10:45	0	0
105	6/13/2016 10:46	0	0
106	6/13/2016 10:47	0	0

107	6/13/2016 10:48	0	0
108	6/13/2016 10:49	0	0
109	6/13/2016 10:50	0	0
110	6/13/2016 10:51	0	0
111	6/13/2016 10:52	0	0
112	6/13/2016 10:53	0	0
113	6/13/2016 10:54	0	0
114	6/13/2016 10:55	0	0
115	6/13/2016 10:56	0	0
116	6/13/2016 10:57	0	0
117	6/13/2016 10:58	0	0
118	6/13/2016 10:59	0	0
119	6/13/2016 11:00	0	0
120	6/13/2016 11:01	0	0
121	6/13/2016 11:02	0	0
122	6/13/2016 11:03	0	0
123	6/13/2016 11:04	0	0
124	6/13/2016 11:05	0	0
125	6/13/2016 11:06	0	0
126	6/13/2016 11:07	0	0
127	6/13/2016 11:08	0	0
128	6/13/2016 11:09	0	0
129	6/13/2016 11:10	0	0
130	6/13/2016 11:11	0	0
131	6/13/2016 11:12	0	0
132	6/13/2016 11:13	0	0
133	6/13/2016 11:14	0	0
134	6/13/2016 11:15	0	0
135	6/13/2016 11:16	0	0
136	6/13/2016 11:17	0	0
137	6/13/2016 11:18	0	0
138	6/13/2016 11:19	0	0
139	6/13/2016 11:20	0	0
140	6/13/2016 11:21	0	0
141	6/13/2016 11:22	0	0
142	6/13/2016 11:23	0	0
143	6/13/2016 11:24	0	0
144	6/13/2016 11:25	0	0
145	6/13/2016 11:26	0	0
146	6/13/2016 11:27	0	0
147	6/13/2016 11:28	0	0
148	6/13/2016 11:29	0	0
149	6/13/2016 11:30	0	0
150	6/13/2016 11:31	0	0
151	6/13/2016 11:32	0	0.001
152	6/13/2016 11:33	0	0.001
153	6/13/2016 11:34	0	0.003

154	6/13/2016 11:35	0	0.003
155	6/13/2016 11:36	0	0.003
156	6/13/2016 11:37	0	0.004
157	6/13/2016 11:38	0	0.005
158	6/13/2016 11:39	0.001	0.006
159	6/13/2016 11:40	0.001	0.006
160	6/13/2016 11:41	0.001	0.006
161	6/13/2016 11:42	0.001	0.006
162	6/13/2016 11:43	0.001	0.006
163	6/13/2016 11:44	0.001	0.006
164	6/13/2016 11:45	0.001	0.006
165	6/13/2016 11:46	0.001	0.006
166	6/13/2016 11:47	0.001	0.005
167	6/13/2016 11:48	0.001	0.005
168	6/13/2016 11:49	0.001	0.003
169	6/13/2016 11:50	0.001	0.003
170	6/13/2016 11:51	0.001	0.003
171	6/13/2016 11:52	0.001	0.002
172	6/13/2016 11:53	0.001	0.001
173	6/13/2016 11:54	0.001	0
174	6/13/2016 11:55	0.001	0
175	6/13/2016 11:56	0.001	0
176	6/13/2016 11:57	0.001	0
177	6/13/2016 11:58	0.001	0
178	6/13/2016 11:59	0.001	0
179	6/13/2016 12:00	0.001	0
180	6/13/2016 12:01	0.001	0
181	6/13/2016 12:02	0.001	0
182	6/13/2016 12:03	0.001	0
183	6/13/2016 12:04	0.001	0
184	6/13/2016 12:05	0.001	0
185	6/13/2016 12:06	0.001	0
186	6/13/2016 12:07	0.001	0
187	6/13/2016 12:08	0.001	0
188	6/13/2016 12:09	0.001	0
189	6/13/2016 12:10	0.001	0.001
190	6/13/2016 12:11	0.001	0.001
191	6/13/2016 12:12	0.001	0.002
192	6/13/2016 12:13	0.001	0.003
193	6/13/2016 12:14	0.001	0.003
194	6/13/2016 12:15	0.001	0.003
195	6/13/2016 12:16	0.001	0.005
196	6/13/2016 12:17	0.001	0.005
197	6/13/2016 12:18	0.001	0.005
198	6/13/2016 12:19	0.001	0.005
199	6/13/2016 12:20	0.001	0.005
200	6/13/2016 12:21	0.001	0.008

201	6/13/2016 12:22	0.001	0.008
202	6/13/2016 12:23	0.001	0.007
203	6/13/2016 12:24	0.001	0.007
204	6/13/2016 12:25	0.001	0.008
205	6/13/2016 12:26	0.001	0.008
206	6/13/2016 12:27	0.001	0.007
207	6/13/2016 12:28	0.001	0.006
208	6/13/2016 12:29	0.001	0.007
209	6/13/2016 12:30	0.001	0.007
210	6/13/2016 12:31	0.001	0.004
211	6/13/2016 12:32	0.001	0.004
212	6/13/2016 12:33	0.001	0.004
213	6/13/2016 12:34	0.001	0.004
214	6/13/2016 12:35	0.001	0.005
215	6/13/2016 12:36	0.001	0.004
216	6/13/2016 12:37	0.001	0.006
217	6/13/2016 12:38	0.001	0.007
218	6/13/2016 12:39	0.001	0.007
219	6/13/2016 12:40	0.001	0.006
220	6/13/2016 12:41	0.001	0.006
221	6/13/2016 12:42	0.001	0.006
222	6/13/2016 12:43	0.001	0.01
223	6/13/2016 12:44	0.001	0.009
224	6/13/2016 12:45	0.001	0.009
225	6/13/2016 12:46	0.001	0.009
226	6/13/2016 12:47	0.001	0.009
227	6/13/2016 12:48	0.001	0.01
228	6/13/2016 12:49	0.001	0.009
229	6/13/2016 12:50	0.001	0.009
230	6/13/2016 12:51	0.001	0.007
231	6/13/2016 12:52	0.001	0.006
232	6/13/2016 12:53	0.001	0.005
233	6/13/2016 12:54	0.001	0.007
234	6/13/2016 12:55	0.001	0.007
235	6/13/2016 12:56	0.001	0.007
236	6/13/2016 12:57	0.001	0.007
237	6/13/2016 12:58	0.001	0.005
238	6/13/2016 12:59	0.001	0.009
239	6/13/2016 13:00	0.001	0.013
240	6/13/2016 13:01	0.002	0.015
241	6/13/2016 13:02	0.002	0.015
242	6/13/2016 13:03	0.002	0.014
243	6/13/2016 13:04	0.002	0.018
244	6/13/2016 13:05	0.002	0.021
245	6/13/2016 13:06	0.002	0.025
246	6/13/2016 13:07	0.002	0.032

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 16/06/13 13:10

Summary

 Unit Name MiniRAE 3000(PGM-7320)
 Unit SN 592-905808
 Unit Firmware Ver V1.10A

Running Mode Search Mode
 Measure Type Min; Avg; Max; Real
 Datalog Mode Continuous
 Datalog Type Manual
 Diagnostic Mode No
 Stop Reason Stop by User

Site ID 18
 User ID 1

Begin 6/13/2016 13:10
 End 6/13/2016 13:33
 Sample Period(s) 60
 Number of Records 22

Sensor VOC(ppm)
 Span 100
 Span 2 N/A
 Low Alarm 50
 High Alarm 100
 Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/13/2016 7:19
 Peak 0.038
 Min 0
 Average 0.004

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/13/2016 13:11	0	0.009	0.043	0
2	6/13/2016 13:12	0	0.007	0.039	0.038

3	6/13/2016 13:13	0	0.003	0.038	0
4	6/13/2016 13:14	0	0.026	0.106	0.001
5	6/13/2016 13:15	0	0.001	0.017	0.001
6	6/13/2016 13:16	0	0	0.001	0
7	6/13/2016 13:17	0	0.01	0.035	0
8	6/13/2016 13:18	0	0.022	0.052	0
9	6/13/2016 13:19	0	0.016	0.061	0.027
10	6/13/2016 13:20	0	0.004	0.039	0
11	6/13/2016 13:21	0	0	0	0
12	6/13/2016 13:22	0	0	0	0
13	6/13/2016 13:23	0	0	0	0
14	6/13/2016 13:24	0	0	0	0
15	6/13/2016 13:25	0	0.001	0.013	0
16	6/13/2016 13:26	0	0	0.011	0.011
17	6/13/2016 13:27	0	0.006	0.033	0.02
18	6/13/2016 13:28	0	0.001	0.015	0
19	6/13/2016 13:29	0	0	0	0
20	6/13/2016 13:30	0	0	0.005	0
21	6/13/2016 13:31	0	0	0.004	0
22	6/13/2016 13:32	0	0	0	0

Peak 0 0.026 0.106 0.038
Min 0 0 0 0
Average 0 0.005 0.023 0.004

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/13/2016 13:11	0	---
2	6/13/2016 13:12	0	---
3	6/13/2016 13:13	0	---
4	6/13/2016 13:14	0	---
5	6/13/2016 13:15	0	---
6	6/13/2016 13:16	0	---
7	6/13/2016 13:17	0	---
8	6/13/2016 13:18	0	---
9	6/13/2016 13:19	0	---
10	6/13/2016 13:20	0	---
11	6/13/2016 13:21	0	---
12	6/13/2016 13:22	0	---
13	6/13/2016 13:23	0	---
14	6/13/2016 13:24	0	---
15	6/13/2016 13:25	0	0.004
16	6/13/2016 13:26	0	0.005
17	6/13/2016 13:27	0	0.004
18	6/13/2016 13:28	0	0.004

19	6/13/2016 13:29	0	0.004
20	6/13/2016 13:30	0	0.004
21	6/13/2016 13:31	0	0.004
22	6/13/2016 13:32	0	0.004

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16/06/13 14:09

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 15
User ID 1

Begin 6/13/2016 14:09
End 6/13/2016 15:45
Sample Period(s) 60
Number of Records 95

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/13/2016 7:19
Peak 0.305
Min 0.079
Average 0.193

Datalog

VOC(ppm) VOC(ppm) VOC(ppm) VOC(ppm)

Index	Date/Time	(Min)	(Avg)	(Max)	(Real)
1	6/13/2016 14:10	0	0.061	0.146	0.103
2	6/13/2016 14:11	0.074	0.168	0.251	0.236
3	6/13/2016 14:12	0.179	0.229	0.318	0.197
4	6/13/2016 14:13	0.107	0.231	0.374	0.29
5	6/13/2016 14:14	0.129	0.221	0.298	0.26
6	6/13/2016 14:15	0.143	0.207	0.31	0.182
7	6/13/2016 14:16	0.184	0.214	0.267	0.211
8	6/13/2016 14:17	0.072	0.138	0.226	0.212
9	6/13/2016 14:18	0.063	0.116	0.229	0.079
10	6/13/2016 14:19	0.075	0.113	0.185	0.127
11	6/13/2016 14:20	0.096	0.169	0.251	0.172
12	6/13/2016 14:21	0.149	0.179	0.201	0.176
13	6/13/2016 14:22	0.103	0.164	0.227	0.103
14	6/13/2016 14:23	0.1	0.157	0.226	0.126
15	6/13/2016 14:24	0.105	0.129	0.159	0.14
16	6/13/2016 14:25	0.115	0.147	0.218	0.12
17	6/13/2016 14:26	0.097	0.153	0.217	0.164
18	6/13/2016 14:27	0.117	0.146	0.191	0.169
19	6/13/2016 14:28	0.11	0.14	0.17	0.139
20	6/13/2016 14:29	0.139	0.172	0.232	0.201
21	6/13/2016 14:30	0.117	0.176	0.224	0.191
22	6/13/2016 14:31	0.126	0.166	0.236	0.164
23	6/13/2016 14:32	0.095	0.138	0.203	0.151
24	6/13/2016 14:33	0.126	0.149	0.19	0.126
25	6/13/2016 14:34	0.116	0.179	0.225	0.22
26	6/13/2016 14:35	0.146	0.19	0.238	0.223
27	6/13/2016 14:36	0.166	0.221	0.263	0.176
28	6/13/2016 14:37	0.118	0.154	0.211	0.198
29	6/13/2016 14:38	0.119	0.161	0.246	0.131
30	6/13/2016 14:39	0.116	0.147	0.189	0.163
31	6/13/2016 14:40	0.098	0.17	0.212	0.212
32	6/13/2016 14:41	0.115	0.179	0.239	0.156
33	6/13/2016 14:42	0.148	0.192	0.233	0.148
34	6/13/2016 14:43	0.14	0.176	0.248	0.14
35	6/13/2016 14:44	0.134	0.158	0.207	0.207
36	6/13/2016 14:45	0.146	0.196	0.23	0.205
37	6/13/2016 14:46	0.13	0.168	0.202	0.198
38	6/13/2016 14:47	0.127	0.192	0.251	0.185
39	6/13/2016 14:48	0.16	0.181	0.206	0.192
40	6/13/2016 14:49	0.157	0.18	0.222	0.217
41	6/13/2016 14:50	0.118	0.169	0.216	0.188
42	6/13/2016 14:51	0.139	0.174	0.21	0.172
43	6/13/2016 14:52	0.154	0.176	0.202	0.183
44	6/13/2016 14:53	0.122	0.16	0.209	0.122
45	6/13/2016 14:54	0.121	0.167	0.215	0.206
46	6/13/2016 14:55	0.173	0.201	0.304	0.215

47	6/13/2016 14:56	0.191	0.204	0.223	0.209
48	6/13/2016 14:57	0.13	0.183	0.237	0.145
49	6/13/2016 14:58	0.127	0.154	0.185	0.146
50	6/13/2016 14:59	0.139	0.189	0.247	0.244
51	6/13/2016 15:00	0.185	0.219	0.25	0.226
52	6/13/2016 15:01	0.147	0.197	0.254	0.154
53	6/13/2016 15:02	0.155	0.206	0.305	0.305
54	6/13/2016 15:03	0.176	0.227	0.286	0.223
55	6/13/2016 15:04	0.153	0.215	0.296	0.219
56	6/13/2016 15:05	0.18	0.218	0.286	0.256
57	6/13/2016 15:06	0.212	0.253	0.294	0.245
58	6/13/2016 15:07	0.158	0.227	0.284	0.177
59	6/13/2016 15:08	0.179	0.22	0.254	0.225
60	6/13/2016 15:09	0.181	0.237	0.272	0.229
61	6/13/2016 15:10	0.145	0.211	0.279	0.258
62	6/13/2016 15:11	0.151	0.227	0.296	0.287
63	6/13/2016 15:12	0.171	0.246	0.279	0.222
64	6/13/2016 15:13	0.2	0.243	0.285	0.22
65	6/13/2016 15:14	0.216	0.276	0.301	0.297
66	6/13/2016 15:15	0.196	0.25	0.296	0.248
67	6/13/2016 15:16	0.214	0.264	0.289	0.243
68	6/13/2016 15:17	0.152	0.201	0.239	0.193
69	6/13/2016 15:18	0.192	0.232	0.263	0.231
70	6/13/2016 15:19	0.171	0.212	0.246	0.192
71	6/13/2016 15:20	0.189	0.214	0.253	0.207
72	6/13/2016 15:21	0.169	0.203	0.254	0.171
73	6/13/2016 15:22	0.155	0.17	0.202	0.185
74	6/13/2016 15:23	0.181	0.189	0.198	0.187
75	6/13/2016 15:24	0.145	0.17	0.212	0.191
76	6/13/2016 15:25	0.148	0.186	0.213	0.199
77	6/13/2016 15:26	0.176	0.189	0.21	0.191
78	6/13/2016 15:27	0.158	0.183	0.202	0.162
79	6/13/2016 15:28	0.165	0.194	0.217	0.202
80	6/13/2016 15:29	0.163	0.2	0.245	0.193
81	6/13/2016 15:30	0.148	0.193	0.22	0.148
82	6/13/2016 15:31	0.144	0.175	0.222	0.176
83	6/13/2016 15:32	0.16	0.189	0.217	0.173
84	6/13/2016 15:33	0.175	0.207	0.234	0.195
85	6/13/2016 15:34	0.148	0.182	0.226	0.226
86	6/13/2016 15:35	0.162	0.202	0.245	0.214
87	6/13/2016 15:36	0.188	0.211	0.233	0.221
88	6/13/2016 15:37	0.196	0.216	0.231	0.213
89	6/13/2016 15:38	0.213	0.226	0.252	0.238
90	6/13/2016 15:39	0.196	0.225	0.276	0.219
91	6/13/2016 15:40	0.137	0.177	0.219	0.155
92	6/13/2016 15:41	0.161	0.187	0.212	0.198
93	6/13/2016 15:42	0.161	0.204	0.226	0.161

94	6/13/2016 15:43	0.162	0.192	0.221	0.181
95	6/13/2016 15:44	0.176	0.196	0.232	0.232

Peak 0.216 0.276 0.374 0.305
Min 0 0.061 0.146 0.079
Average 0.146 0.189 0.238 0.193

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/13/2016 14:10	0	---
2	6/13/2016 14:11	0.001	---
3	6/13/2016 14:12	0.001	---
4	6/13/2016 14:13	0.002	---
5	6/13/2016 14:14	0.002	---
6	6/13/2016 14:15	0.003	---
7	6/13/2016 14:16	0.003	---
8	6/13/2016 14:17	0.004	---
9	6/13/2016 14:18	0.004	---
10	6/13/2016 14:19	0.004	---
11	6/13/2016 14:20	0.004	---
12	6/13/2016 14:21	0.005	---
13	6/13/2016 14:22	0.005	---
14	6/13/2016 14:23	0.005	---
15	6/13/2016 14:24	0.005	0.174
16	6/13/2016 14:25	0.006	0.175
17	6/13/2016 14:26	0.006	0.171
18	6/13/2016 14:27	0.006	0.169
19	6/13/2016 14:28	0.007	0.159
20	6/13/2016 14:29	0.007	0.155
21	6/13/2016 14:30	0.007	0.155
22	6/13/2016 14:31	0.008	0.152
23	6/13/2016 14:32	0.008	0.148
24	6/13/2016 14:33	0.008	0.151
25	6/13/2016 14:34	0.009	0.157
26	6/13/2016 14:35	0.009	0.161
27	6/13/2016 14:36	0.01	0.161
28	6/13/2016 14:37	0.01	0.167
29	6/13/2016 14:38	0.01	0.168
30	6/13/2016 14:39	0.011	0.169
31	6/13/2016 14:40	0.011	0.175
32	6/13/2016 14:41	0.011	0.175
33	6/13/2016 14:42	0.012	0.173
34	6/13/2016 14:43	0.012	0.173
35	6/13/2016 14:44	0.013	0.174
36	6/13/2016 14:45	0.013	0.175
37	6/13/2016 14:46	0.013	0.177

38	6/13/2016 14:47	0.014	0.179
39	6/13/2016 14:48	0.014	0.184
40	6/13/2016 14:49	0.015	0.183
41	6/13/2016 14:50	0.015	0.181
42	6/13/2016 14:51	0.015	0.181
43	6/13/2016 14:52	0.016	0.18
44	6/13/2016 14:53	0.016	0.179
45	6/13/2016 14:54	0.016	0.182
46	6/13/2016 14:55	0.017	0.182
47	6/13/2016 14:56	0.017	0.186
48	6/13/2016 14:57	0.018	0.186
49	6/13/2016 14:58	0.018	0.186
50	6/13/2016 14:59	0.018	0.188
51	6/13/2016 15:00	0.019	0.19
52	6/13/2016 15:01	0.019	0.187
53	6/13/2016 15:02	0.02	0.195
54	6/13/2016 15:03	0.02	0.197
55	6/13/2016 15:04	0.021	0.197
56	6/13/2016 15:05	0.021	0.202
57	6/13/2016 15:06	0.022	0.207
58	6/13/2016 15:07	0.022	0.206
59	6/13/2016 15:08	0.023	0.213
60	6/13/2016 15:09	0.023	0.215
61	6/13/2016 15:10	0.024	0.217
62	6/13/2016 15:11	0.024	0.223
63	6/13/2016 15:12	0.025	0.228
64	6/13/2016 15:13	0.025	0.233
65	6/13/2016 15:14	0.026	0.236
66	6/13/2016 15:15	0.026	0.238
67	6/13/2016 15:16	0.027	0.244
68	6/13/2016 15:17	0.027	0.236
69	6/13/2016 15:18	0.028	0.237
70	6/13/2016 15:19	0.028	0.235
71	6/13/2016 15:20	0.029	0.232
72	6/13/2016 15:21	0.029	0.227
73	6/13/2016 15:22	0.029	0.227
74	6/13/2016 15:23	0.03	0.225
75	6/13/2016 15:24	0.03	0.222
76	6/13/2016 15:25	0.03	0.218
77	6/13/2016 15:26	0.031	0.212
78	6/13/2016 15:27	0.031	0.208
79	6/13/2016 15:28	0.032	0.207
80	6/13/2016 15:29	0.032	0.2
81	6/13/2016 15:30	0.032	0.193
82	6/13/2016 15:31	0.033	0.189
83	6/13/2016 15:32	0.033	0.187
84	6/13/2016 15:33	0.033	0.185

85	6/13/2016 15:34	0.034	0.187
86	6/13/2016 15:35	0.034	0.188
87	6/13/2016 15:36	0.035	0.191
88	6/13/2016 15:37	0.035	0.193
89	6/13/2016 15:38	0.036	0.196
90	6/13/2016 15:39	0.036	0.198
91	6/13/2016 15:40	0.037	0.195
92	6/13/2016 15:41	0.037	0.196
93	6/13/2016 15:42	0.037	0.195
94	6/13/2016 15:43	0.038	0.194
95	6/13/2016 15:44	0.038	0.197

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16/06/14 07:27

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 15
User ID 1

Begin 6/14/2016 7:27
End 6/14/2016 7:27
Sample Period(s) 60
Number of Records 0

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene

Calibration Time

6/14/2016 7:26

Datalog

0 record.

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16/06/14 07:27

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 16
User ID 1

Begin 6/14/2016 7:27
End 6/14/2016 7:28
Sample Period(s) 60
Number of Records 0

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/14/2016 7:26

Datalog

0 record.

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16/06/14 08:12

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 15
User ID 1

Begin 6/14/2016 8:12
End 6/14/2016 10:03
Sample Period(s) 60
Number of Records 110

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/14/2016 7:26
Peak 0.096
Min 0
Average 0.038

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/14/2016 8:13	0	0.004	0.025	0.021
2	6/14/2016 8:14	0.008	0.04	0.081	0.015
3	6/14/2016 8:15	0	0.022	0.075	0
4	6/14/2016 8:16	0	0.021	0.047	0.041
5	6/14/2016 8:17	0.006	0.036	0.065	0.038

6	6/14/2016 8:18	0.026	0.049	0.074	0.056
7	6/14/2016 8:19	0.041	0.062	0.096	0.094
8	6/14/2016 8:20	0.075	0.095	0.122	0.082
9	6/14/2016 8:21	0.045	0.064	0.084	0.063
10	6/14/2016 8:22	0.058	0.074	0.089	0.077
11	6/14/2016 8:23	0.017	0.042	0.085	0.048
12	6/14/2016 8:24	0.023	0.063	0.098	0.025
13	6/14/2016 8:25	0.028	0.069	0.099	0.052
14	6/14/2016 8:26	0.002	0.02	0.058	0.054
15	6/14/2016 8:27	0.04	0.065	0.097	0.096
16	6/14/2016 8:28	0.008	0.047	0.09	0.067
17	6/14/2016 8:29	0.039	0.069	0.098	0.057
18	6/14/2016 8:30	0.016	0.065	0.106	0.03
19	6/14/2016 8:31	0.026	0.053	0.093	0.074
20	6/14/2016 8:32	0.005	0.039	0.083	0.015
21	6/14/2016 8:33	0	0.005	0.021	0.02
22	6/14/2016 8:34	0	0.003	0.019	0.003
23	6/14/2016 8:35	0	0	0.003	0
24	6/14/2016 8:36	0	0.022	0.046	0.043
25	6/14/2016 8:37	0.019	0.041	0.079	0.035
26	6/14/2016 8:38	0.008	0.031	0.058	0.037
27	6/14/2016 8:39	0.002	0.034	0.059	0.006
28	6/14/2016 8:40	0.001	0.022	0.044	0.039
29	6/14/2016 8:41	0.015	0.048	0.073	0.06
30	6/14/2016 8:42	0.033	0.065	0.093	0.09
31	6/14/2016 8:43	0.026	0.047	0.093	0.036
32	6/14/2016 8:44	0.025	0.049	0.081	0.07
33	6/14/2016 8:45	0.014	0.036	0.067	0.049
34	6/14/2016 8:46	0.017	0.047	0.091	0.062
35	6/14/2016 8:47	0.015	0.051	0.077	0.015
36	6/14/2016 8:48	0.008	0.027	0.056	0.04
37	6/14/2016 8:49	0.006	0.037	0.082	0.015
38	6/14/2016 8:50	0.005	0.025	0.066	0.014
39	6/14/2016 8:51	0.002	0.034	0.06	0.05
40	6/14/2016 8:52	0.025	0.045	0.071	0.054
41	6/14/2016 8:53	0.018	0.04	0.068	0.027
42	6/14/2016 8:54	0.023	0.047	0.077	0.058
43	6/14/2016 8:55	0.021	0.059	0.086	0.043
44	6/14/2016 8:56	0.019	0.04	0.05	0.05
45	6/14/2016 8:57	0.049	0.071	0.091	0.049
46	6/14/2016 8:58	0.003	0.047	0.085	0.064
47	6/14/2016 8:59	0.023	0.05	0.069	0.065
48	6/14/2016 9:00	0.052	0.071	0.094	0.063
49	6/14/2016 9:01	0.039	0.068	0.11	0.057
50	6/14/2016 9:02	0.021	0.049	0.068	0.021
51	6/14/2016 9:03	0.013	0.05	0.075	0.07
52	6/14/2016 9:04	0.044	0.058	0.08	0.059

53	6/14/2016 9:05	0.032	0.06	0.084	0.082
54	6/14/2016 9:06	0.019	0.043	0.077	0.034
55	6/14/2016 9:07	0.034	0.046	0.058	0.058
56	6/14/2016 9:08	0.009	0.049	0.079	0.063
57	6/14/2016 9:09	0.027	0.054	0.078	0.054
58	6/14/2016 9:10	0.032	0.047	0.068	0.034
59	6/14/2016 9:11	0.033	0.047	0.06	0.043
60	6/14/2016 9:12	0.036	0.049	0.06	0.036
61	6/14/2016 9:13	0.037	0.058	0.075	0.055
62	6/14/2016 9:14	0.023	0.054	0.084	0.032
63	6/14/2016 9:15	0.029	0.05	0.072	0.071
64	6/14/2016 9:16	0.066	0.079	0.095	0.069
65	6/14/2016 9:17	0.053	0.073	0.089	0.053
66	6/14/2016 9:18	0.013	0.029	0.05	0.013
67	6/14/2016 9:19	0.013	0.034	0.05	0.05
68	6/14/2016 9:20	0	0.031	0.063	0.005
69	6/14/2016 9:21	0	0.018	0.041	0.033
70	6/14/2016 9:22	0.014	0.043	0.069	0.014
71	6/14/2016 9:23	0.015	0.035	0.056	0.056
72	6/14/2016 9:24	0.004	0.03	0.071	0.013
73	6/14/2016 9:25	0.006	0.028	0.06	0.044
74	6/14/2016 9:26	0.011	0.031	0.06	0.037
75	6/14/2016 9:27	0.005	0.024	0.062	0.015
76	6/14/2016 9:28	0	0.014	0.036	0.024
77	6/14/2016 9:29	0	0.015	0.039	0.035
78	6/14/2016 9:30	0	0.003	0.031	0.007
79	6/14/2016 9:31	0.011	0.03	0.075	0.075
80	6/14/2016 9:32	0.027	0.048	0.072	0.064
81	6/14/2016 9:33	0.024	0.05	0.075	0.05
82	6/14/2016 9:34	0	0.03	0.071	0
83	6/14/2016 9:35	0	0.002	0.014	0
84	6/14/2016 9:36	0	0.006	0.03	0
85	6/14/2016 9:37	0	0.004	0.021	0.006
86	6/14/2016 9:38	0	0.018	0.05	0
87	6/14/2016 9:39	0	0	0.003	0
88	6/14/2016 9:40	0	0.013	0.042	0.02
89	6/14/2016 9:41	0.011	0.021	0.048	0.032
90	6/14/2016 9:42	0	0.011	0.042	0.042
91	6/14/2016 9:43	0.001	0.014	0.039	0.013
92	6/14/2016 9:44	0	0.014	0.035	0.013
93	6/14/2016 9:45	0.009	0.025	0.055	0.035
94	6/14/2016 9:46	0.024	0.037	0.067	0.035
95	6/14/2016 9:47	0.019	0.044	0.087	0.029
96	6/14/2016 9:48	0.012	0.038	0.082	0.08
97	6/14/2016 9:49	0.014	0.038	0.089	0.014
98	6/14/2016 9:50	0.002	0.021	0.035	0.026
99	6/14/2016 9:51	0	0.011	0.03	0.021

100	6/14/2016 9:52	0	0.014	0.03	0.019
101	6/14/2016 9:53	0.001	0.02	0.048	0.048
102	6/14/2016 9:54	0.001	0.017	0.05	0.004
103	6/14/2016 9:55	0	0.006	0.025	0.006
104	6/14/2016 9:56	0.006	0.02	0.034	0.023
105	6/14/2016 9:57	0.007	0.018	0.031	0.022
106	6/14/2016 9:58	0.003	0.019	0.054	0.023
107	6/14/2016 9:59	0.013	0.033	0.075	0.037
108	6/14/2016 10:00	0.016	0.03	0.06	0.035
109	6/14/2016 10:01	0.001	0.016	0.032	0.024
110	6/14/2016 10:02	0.008	0.021	0.039	0.025

Peak	0.075	0.095	0.122	0.096
Min	0	0	0.003	0
Average	0.016	0.037	0.064	0.038

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/14/2016 8:13	0	---
2	6/14/2016 8:14	0	---
3	6/14/2016 8:15	0	---
4	6/14/2016 8:16	0	---
5	6/14/2016 8:17	0	---
6	6/14/2016 8:18	0	---
7	6/14/2016 8:19	0.001	---
8	6/14/2016 8:20	0.001	---
9	6/14/2016 8:21	0.001	---
10	6/14/2016 8:22	0.001	---
11	6/14/2016 8:23	0.001	---
12	6/14/2016 8:24	0.001	---
13	6/14/2016 8:25	0.001	---
14	6/14/2016 8:26	0.001	---
15	6/14/2016 8:27	0.002	0.051
16	6/14/2016 8:28	0.002	0.054
17	6/14/2016 8:29	0.002	0.057
18	6/14/2016 8:30	0.002	0.059
19	6/14/2016 8:31	0.002	0.061
20	6/14/2016 8:32	0.002	0.059
21	6/14/2016 8:33	0.002	0.057
22	6/14/2016 8:34	0.002	0.051
23	6/14/2016 8:35	0.002	0.045
24	6/14/2016 8:36	0.002	0.044
25	6/14/2016 8:37	0.002	0.041
26	6/14/2016 8:38	0.002	0.041

27	6/14/2016 8:39	0.002	0.039
28	6/14/2016 8:40	0.002	0.038
29	6/14/2016 8:41	0.003	0.039
30	6/14/2016 8:42	0.003	0.038
31	6/14/2016 8:43	0.003	0.036
32	6/14/2016 8:44	0.003	0.037
33	6/14/2016 8:45	0.003	0.038
34	6/14/2016 8:46	0.003	0.038
35	6/14/2016 8:47	0.003	0.038
36	6/14/2016 8:48	0.003	0.039
37	6/14/2016 8:49	0.003	0.04
38	6/14/2016 8:50	0.003	0.041
39	6/14/2016 8:51	0.004	0.041
40	6/14/2016 8:52	0.004	0.042
41	6/14/2016 8:53	0.004	0.042
42	6/14/2016 8:54	0.004	0.045
43	6/14/2016 8:55	0.004	0.046
44	6/14/2016 8:56	0.004	0.045
45	6/14/2016 8:57	0.004	0.042
46	6/14/2016 8:58	0.004	0.044
47	6/14/2016 8:59	0.004	0.044
48	6/14/2016 9:00	0.005	0.045
49	6/14/2016 9:01	0.005	0.044
50	6/14/2016 9:02	0.005	0.045
51	6/14/2016 9:03	0.005	0.047
52	6/14/2016 9:04	0.005	0.05
53	6/14/2016 9:05	0.005	0.054
54	6/14/2016 9:06	0.005	0.053
55	6/14/2016 9:07	0.005	0.053
56	6/14/2016 9:08	0.005	0.056
57	6/14/2016 9:09	0.006	0.055
58	6/14/2016 9:10	0.006	0.055
59	6/14/2016 9:11	0.006	0.054
60	6/14/2016 9:12	0.006	0.054
61	6/14/2016 9:13	0.006	0.053
62	6/14/2016 9:14	0.006	0.051
63	6/14/2016 9:15	0.006	0.051
64	6/14/2016 9:16	0.006	0.052
65	6/14/2016 9:17	0.006	0.054
66	6/14/2016 9:18	0.006	0.05
67	6/14/2016 9:19	0.006	0.05
68	6/14/2016 9:20	0.007	0.045
69	6/14/2016 9:21	0.007	0.045
70	6/14/2016 9:22	0.007	0.042
71	6/14/2016 9:23	0.007	0.041
72	6/14/2016 9:24	0.007	0.038
73	6/14/2016 9:25	0.007	0.039

74	6/14/2016 9:26	0.007	0.039
75	6/14/2016 9:27	0.007	0.037
76	6/14/2016 9:28	0.007	0.035
77	6/14/2016 9:29	0.007	0.035
78	6/14/2016 9:30	0.007	0.031
79	6/14/2016 9:31	0.007	0.032
80	6/14/2016 9:32	0.007	0.032
81	6/14/2016 9:33	0.007	0.035
82	6/14/2016 9:34	0.007	0.031
83	6/14/2016 9:35	0.007	0.031
84	6/14/2016 9:36	0.007	0.029
85	6/14/2016 9:37	0.007	0.028
86	6/14/2016 9:38	0.007	0.025
87	6/14/2016 9:39	0.007	0.024
88	6/14/2016 9:40	0.008	0.022
89	6/14/2016 9:41	0.008	0.022
90	6/14/2016 9:42	0.008	0.024
91	6/14/2016 9:43	0.008	0.023
92	6/14/2016 9:44	0.008	0.021
93	6/14/2016 9:45	0.008	0.023
94	6/14/2016 9:46	0.008	0.021
95	6/14/2016 9:47	0.008	0.018
96	6/14/2016 9:48	0.008	0.02
97	6/14/2016 9:49	0.008	0.021
98	6/14/2016 9:50	0.008	0.023
99	6/14/2016 9:51	0.008	0.024
100	6/14/2016 9:52	0.008	0.025
101	6/14/2016 9:53	0.008	0.028
102	6/14/2016 9:54	0.008	0.029
103	6/14/2016 9:55	0.008	0.028
104	6/14/2016 9:56	0.008	0.027
105	6/14/2016 9:57	0.008	0.026
106	6/14/2016 9:58	0.009	0.027
107	6/14/2016 9:59	0.009	0.028
108	6/14/2016 10:00	0.009	0.028
109	6/14/2016 10:01	0.009	0.027
110	6/14/2016 10:02	0.009	0.027

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16/06/14 10:21

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Stop by User

Site ID 16
User ID 1

Begin 6/14/2016 10:21
End 6/14/2016 10:42
Sample Period(s) 60
Number of Records 21

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutene
Calibration Time 6/14/2016 7:26
Peak 0.223
Min 0
Average 0.092

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/14/2016 10:22	0	0	0	0
2	6/14/2016 10:23	0	0	0	0
3	6/14/2016 10:24	0	0.002	0.016	0.01
4	6/14/2016 10:25	0	0.013	0.044	0.026
5	6/14/2016 10:26	0	0.04	0.085	0.081
6	6/14/2016 10:27	0.005	0.041	0.078	0.058
7	6/14/2016 10:28	0	0.022	0.096	0.009
8	6/14/2016 10:29	0	0.009	0.068	0.014
9	6/14/2016 10:30	0	0.028	0.074	0.074
10	6/14/2016 10:31	0.077	0.1	0.129	0.117
11	6/14/2016 10:32	0.096	0.146	0.207	0.146
12	6/14/2016 10:33	0.117	0.162	0.232	0.187
13	6/14/2016 10:34	0.131	0.17	0.232	0.198

14	6/14/2016 10:35	0.118	0.144	0.188	0.145
15	6/14/2016 10:36	0.12	0.168	0.216	0.139
16	6/14/2016 10:37	0.013	0.059	0.132	0.027
17	6/14/2016 10:38	0.028	0.089	0.148	0.115
18	6/14/2016 10:39	0.06	0.132	0.211	0.165
19	6/14/2016 10:40	0.144	0.177	0.225	0.223
20	6/14/2016 10:41	0.089	0.192	0.264	0.1
21	6/14/2016 10:42	0.086	0.126	0.177	0.089

Peak 0.144 0.192 0.264 0.223
Min 0 0 0 0
Average 0.052 0.087 0.134 0.092

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/14/2016 10:22	0	---
2	6/14/2016 10:23	0	---
3	6/14/2016 10:24	0	---
4	6/14/2016 10:25	0	---
5	6/14/2016 10:26	0	---
6	6/14/2016 10:27	0	---
7	6/14/2016 10:28	0	---
8	6/14/2016 10:29	0	---
9	6/14/2016 10:30	0.001	---
10	6/14/2016 10:31	0.001	---
11	6/14/2016 10:32	0.001	---
12	6/14/2016 10:33	0.002	---
13	6/14/2016 10:34	0.002	---
14	6/14/2016 10:35	0.002	---
15	6/14/2016 10:36	0.003	0.08
16	6/14/2016 10:37	0.003	0.082
17	6/14/2016 10:38	0.003	0.09
18	6/14/2016 10:39	0.003	0.1
19	6/14/2016 10:40	0.004	0.113
20	6/14/2016 10:41	0.004	0.114
21	6/14/2016 10:42	0.004	0.117

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16/06/14 11:32

Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-905808
 Unit Firmware Ver V1.10A

 Running Mode Search Mode
 Measure Type Min; Avg; Max; Real
 Datalog Mode Continuous
 Datalog Type Manual
 Diagnostic Mode No
 Stop Reason Stop by User

 Site ID 17
 User ID 1

 Begin 6/14/2016 11:32
 End 6/14/2016 13:38
 Sample Period(s) 60
 Number of Records 126

 Sensor VOC(ppm)
 Span 100
 Span 2 N/A
 Low Alarm 50
 High Alarm 100
 Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/14/2016 7:26
 Peak 0.181
 Min 0
 Average 0.084

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/14/2016 11:33	0	0.001	0.015	0
2	6/14/2016 11:34	0	0	0	0
3	6/14/2016 11:35	0	0	0	0
4	6/14/2016 11:36	0	0.001	0.038	0.038
5	6/14/2016 11:37	0	0.001	0.03	0
6	6/14/2016 11:38	0	0	0	0
7	6/14/2016 11:39	0	0	0	0
8	6/14/2016 11:40	0	0	0	0
9	6/14/2016 11:41	0	0	0.009	0
10	6/14/2016 11:42	0	0	0	0
11	6/14/2016 11:43	0	0.001	0.014	0

12	6/14/2016 11:44	0	0.002	0.014	0
13	6/14/2016 11:45	0	0	0.005	0.005
14	6/14/2016 11:46	0	0.005	0.039	0.002
15	6/14/2016 11:47	0	0	0.006	0
16	6/14/2016 11:48	0	0.002	0.014	0.001
17	6/14/2016 11:49	0	0	0.003	0
18	6/14/2016 11:50	0	0	0.004	0
19	6/14/2016 11:51	0	0.004	0.03	0.001
20	6/14/2016 11:52	0	0	0.004	0
21	6/14/2016 11:53	0	0.001	0.015	0.011
22	6/14/2016 11:54	0	0.008	0.029	0
23	6/14/2016 11:55	0	0.003	0.017	0.017
24	6/14/2016 11:56	0	0.007	0.044	0
25	6/14/2016 11:57	0	0.003	0.012	0.012
26	6/14/2016 11:58	0.005	0.016	0.032	0.023
27	6/14/2016 11:59	0.001	0.01	0.024	0.024
28	6/14/2016 12:00	0.005	0.019	0.046	0.032
29	6/14/2016 12:01	0.011	0.023	0.037	0.023
30	6/14/2016 12:02	0.007	0.024	0.054	0.035
31	6/14/2016 12:03	0.018	0.028	0.04	0.022
32	6/14/2016 12:04	0.022	0.029	0.044	0.043
33	6/14/2016 12:05	0.028	0.037	0.062	0.043
34	6/14/2016 12:06	0.037	0.046	0.063	0.046
35	6/14/2016 12:07	0.037	0.05	0.065	0.054
36	6/14/2016 12:08	0.028	0.041	0.06	0.037
37	6/14/2016 12:09	0.029	0.039	0.05	0.047
38	6/14/2016 12:10	0.043	0.055	0.074	0.05
39	6/14/2016 12:11	0.045	0.057	0.071	0.045
40	6/14/2016 12:12	0.03	0.055	0.08	0.053
41	6/14/2016 12:13	0.043	0.065	0.088	0.067
42	6/14/2016 12:14	0.069	0.084	0.097	0.08
43	6/14/2016 12:15	0.063	0.075	0.092	0.076
44	6/14/2016 12:16	0.071	0.078	0.092	0.089
45	6/14/2016 12:17	0.07	0.086	0.11	0.07
46	6/14/2016 12:18	0.062	0.076	0.102	0.102
47	6/14/2016 12:19	0.069	0.093	0.121	0.112
48	6/14/2016 12:20	0.095	0.112	0.131	0.109
49	6/14/2016 12:21	0.078	0.093	0.109	0.094
50	6/14/2016 12:22	0.082	0.099	0.119	0.09
51	6/14/2016 12:23	0.086	0.106	0.129	0.099
52	6/14/2016 12:24	0.076	0.095	0.119	0.119
53	6/14/2016 12:25	0.09	0.103	0.118	0.098
54	6/14/2016 12:26	0.082	0.096	0.121	0.093
55	6/14/2016 12:27	0.079	0.088	0.099	0.098
56	6/14/2016 12:28	0.078	0.099	0.113	0.078
57	6/14/2016 12:29	0.067	0.082	0.097	0.092
58	6/14/2016 12:30	0.081	0.092	0.115	0.082

59	6/14/2016 12:31	0.082	0.105	0.143	0.128
60	6/14/2016 12:32	0.096	0.109	0.127	0.103
61	6/14/2016 12:33	0.094	0.1	0.109	0.097
62	6/14/2016 12:34	0.092	0.105	0.127	0.109
63	6/14/2016 12:35	0.098	0.103	0.113	0.108
64	6/14/2016 12:36	0.097	0.106	0.117	0.117
65	6/14/2016 12:37	0.102	0.113	0.133	0.12
66	6/14/2016 12:38	0.099	0.114	0.131	0.103
67	6/14/2016 12:39	0.076	0.088	0.104	0.084
68	6/14/2016 12:40	0.08	0.097	0.116	0.098
69	6/14/2016 12:41	0.091	0.102	0.121	0.107
70	6/14/2016 12:42	0.083	0.093	0.113	0.09
71	6/14/2016 12:43	0.081	0.089	0.101	0.094
72	6/14/2016 12:44	0.093	0.102	0.112	0.105
73	6/14/2016 12:45	0.084	0.104	0.117	0.084
74	6/14/2016 12:46	0.077	0.086	0.098	0.098
75	6/14/2016 12:47	0.086	0.108	0.133	0.089
76	6/14/2016 12:48	0.09	0.109	0.136	0.093
77	6/14/2016 12:49	0.09	0.099	0.108	0.093
78	6/14/2016 12:50	0.094	0.106	0.13	0.107
79	6/14/2016 12:51	0.1	0.106	0.118	0.104
80	6/14/2016 12:52	0.097	0.11	0.135	0.097
81	6/14/2016 12:53	0.098	0.113	0.127	0.127
82	6/14/2016 12:54	0.106	0.128	0.153	0.124
83	6/14/2016 12:55	0.102	0.11	0.12	0.107
84	6/14/2016 12:56	0.105	0.115	0.13	0.115
85	6/14/2016 12:57	0.113	0.12	0.134	0.128
86	6/14/2016 12:58	0.107	0.12	0.145	0.109
87	6/14/2016 12:59	0.106	0.118	0.132	0.126
88	6/14/2016 13:00	0.084	0.1	0.124	0.104
89	6/14/2016 13:01	0.102	0.11	0.124	0.106
90	6/14/2016 13:02	0.105	0.111	0.119	0.108
91	6/14/2016 13:03	0.091	0.114	0.159	0.112
92	6/14/2016 13:04	0.115	0.126	0.145	0.141
93	6/14/2016 13:05	0.139	0.155	0.186	0.157
94	6/14/2016 13:06	0.107	0.136	0.171	0.107
95	6/14/2016 13:07	0.102	0.131	0.174	0.14
96	6/14/2016 13:08	0.132	0.142	0.164	0.135
97	6/14/2016 13:09	0.123	0.14	0.155	0.141
98	6/14/2016 13:10	0.128	0.141	0.172	0.137
99	6/14/2016 13:11	0.12	0.134	0.146	0.12
100	6/14/2016 13:12	0.123	0.138	0.151	0.132
101	6/14/2016 13:13	0.123	0.138	0.16	0.14
102	6/14/2016 13:14	0.114	0.143	0.204	0.114
103	6/14/2016 13:15	0.105	0.126	0.15	0.139
104	6/14/2016 13:16	0.125	0.135	0.151	0.125
105	6/14/2016 13:17	0.122	0.13	0.143	0.128

106	6/14/2016 13:18	0.111	0.132	0.154	0.111
107	6/14/2016 13:19	0.101	0.116	0.132	0.129
108	6/14/2016 13:20	0.111	0.117	0.131	0.118
109	6/14/2016 13:21	0.115	0.118	0.125	0.12
110	6/14/2016 13:22	0.115	0.127	0.142	0.142
111	6/14/2016 13:23	0.14	0.15	0.17	0.142
112	6/14/2016 13:24	0.1	0.128	0.152	0.103
113	6/14/2016 13:25	0.108	0.126	0.136	0.126
114	6/14/2016 13:26	0.103	0.12	0.135	0.114
115	6/14/2016 13:27	0.118	0.133	0.15	0.138
116	6/14/2016 13:28	0.112	0.133	0.159	0.141
117	6/14/2016 13:29	0.125	0.136	0.149	0.133
118	6/14/2016 13:30	0.129	0.143	0.167	0.166
119	6/14/2016 13:31	0.112	0.144	0.177	0.151
120	6/14/2016 13:32	0.133	0.143	0.164	0.137
121	6/14/2016 13:33	0.119	0.13	0.141	0.141
122	6/14/2016 13:34	0.118	0.135	0.155	0.127
123	6/14/2016 13:35	0.127	0.142	0.161	0.144
124	6/14/2016 13:36	0.13	0.145	0.163	0.144
125	6/14/2016 13:37	0.145	0.157	0.174	0.152
126	6/14/2016 13:38	0.13	0.155	0.183	0.181

Peak 0.145 0.157 0.204 0.181
Min 0 0 0 0
Average 0.071 0.083 0.101 0.084

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/14/2016 11:33	0	---
2	6/14/2016 11:34	0	---
3	6/14/2016 11:35	0	---
4	6/14/2016 11:36	0	---
5	6/14/2016 11:37	0	---
6	6/14/2016 11:38	0	---
7	6/14/2016 11:39	0	---
8	6/14/2016 11:40	0	---
9	6/14/2016 11:41	0	---
10	6/14/2016 11:42	0	---
11	6/14/2016 11:43	0	---
12	6/14/2016 11:44	0	---
13	6/14/2016 11:45	0	---
14	6/14/2016 11:46	0	---
15	6/14/2016 11:47	0	0.003
16	6/14/2016 11:48	0	0.003

17	6/14/2016 11:49	0	0.003
18	6/14/2016 11:50	0	0.003
19	6/14/2016 11:51	0	0.001
20	6/14/2016 11:52	0	0.001
21	6/14/2016 11:53	0	0.001
22	6/14/2016 11:54	0	0.001
23	6/14/2016 11:55	0	0.002
24	6/14/2016 11:56	0	0.002
25	6/14/2016 11:57	0	0.003
26	6/14/2016 11:58	0	0.005
27	6/14/2016 11:59	0	0.006
28	6/14/2016 12:00	0	0.008
29	6/14/2016 12:01	0	0.01
30	6/14/2016 12:02	0	0.012
31	6/14/2016 12:03	0.001	0.013
32	6/14/2016 12:04	0.001	0.016
33	6/14/2016 12:05	0.001	0.019
34	6/14/2016 12:06	0.001	0.022
35	6/14/2016 12:07	0.001	0.026
36	6/14/2016 12:08	0.001	0.027
37	6/14/2016 12:09	0.001	0.031
38	6/14/2016 12:10	0.001	0.033
39	6/14/2016 12:11	0.001	0.036
40	6/14/2016 12:12	0.001	0.038
41	6/14/2016 12:13	0.002	0.041
42	6/14/2016 12:14	0.002	0.045
43	6/14/2016 12:15	0.002	0.048
44	6/14/2016 12:16	0.002	0.052
45	6/14/2016 12:17	0.002	0.055
46	6/14/2016 12:18	0.002	0.06
47	6/14/2016 12:19	0.003	0.065
48	6/14/2016 12:20	0.003	0.069
49	6/14/2016 12:21	0.003	0.072
50	6/14/2016 12:22	0.003	0.075
51	6/14/2016 12:23	0.003	0.079
52	6/14/2016 12:24	0.004	0.084
53	6/14/2016 12:25	0.004	0.087
54	6/14/2016 12:26	0.004	0.09
55	6/14/2016 12:27	0.004	0.093
56	6/14/2016 12:28	0.004	0.094
57	6/14/2016 12:29	0.005	0.095
58	6/14/2016 12:30	0.005	0.095
59	6/14/2016 12:31	0.005	0.098
60	6/14/2016 12:32	0.005	0.1
61	6/14/2016 12:33	0.006	0.099
62	6/14/2016 12:34	0.006	0.099
63	6/14/2016 12:35	0.006	0.099

64	6/14/2016 12:36	0.006	0.101
65	6/14/2016 12:37	0.006	0.103
66	6/14/2016 12:38	0.007	0.103
67	6/14/2016 12:39	0.007	0.101
68	6/14/2016 12:40	0.007	0.101
69	6/14/2016 12:41	0.007	0.102
70	6/14/2016 12:42	0.007	0.101
71	6/14/2016 12:43	0.008	0.102
72	6/14/2016 12:44	0.008	0.103
73	6/14/2016 12:45	0.008	0.103
74	6/14/2016 12:46	0.008	0.101
75	6/14/2016 12:47	0.008	0.1
76	6/14/2016 12:48	0.009	0.1
77	6/14/2016 12:49	0.009	0.099
78	6/14/2016 12:50	0.009	0.099
79	6/14/2016 12:51	0.009	0.098
80	6/14/2016 12:52	0.009	0.096
81	6/14/2016 12:53	0.01	0.098
82	6/14/2016 12:54	0.01	0.101
83	6/14/2016 12:55	0.01	0.101
84	6/14/2016 12:56	0.01	0.102
85	6/14/2016 12:57	0.011	0.104
86	6/14/2016 12:58	0.011	0.105
87	6/14/2016 12:59	0.011	0.107
88	6/14/2016 13:00	0.011	0.108
89	6/14/2016 13:01	0.012	0.109
90	6/14/2016 13:02	0.012	0.11
91	6/14/2016 13:03	0.012	0.111
92	6/14/2016 13:04	0.012	0.114
93	6/14/2016 13:05	0.013	0.118
94	6/14/2016 13:06	0.013	0.118
95	6/14/2016 13:07	0.013	0.121
96	6/14/2016 13:08	0.014	0.121
97	6/14/2016 13:09	0.014	0.122
98	6/14/2016 13:10	0.014	0.124
99	6/14/2016 13:11	0.014	0.125
100	6/14/2016 13:12	0.015	0.125
101	6/14/2016 13:13	0.015	0.127
102	6/14/2016 13:14	0.015	0.126
103	6/14/2016 13:15	0.015	0.129
104	6/14/2016 13:16	0.016	0.13
105	6/14/2016 13:17	0.016	0.131
106	6/14/2016 13:18	0.016	0.131
107	6/14/2016 13:19	0.016	0.13
108	6/14/2016 13:20	0.017	0.128
109	6/14/2016 13:21	0.017	0.129
110	6/14/2016 13:22	0.017	0.129

111	6/14/2016 13:23	0.018	0.129
112	6/14/2016 13:24	0.018	0.127
113	6/14/2016 13:25	0.018	0.126
114	6/14/2016 13:26	0.018	0.126
115	6/14/2016 13:27	0.019	0.126
116	6/14/2016 13:28	0.019	0.126
117	6/14/2016 13:29	0.019	0.127
118	6/14/2016 13:30	0.019	0.129
119	6/14/2016 13:31	0.02	0.131
120	6/14/2016 13:32	0.02	0.131
121	6/14/2016 13:33	0.02	0.133
122	6/14/2016 13:34	0.021	0.133
123	6/14/2016 13:35	0.021	0.135
124	6/14/2016 13:36	0.021	0.137
125	6/14/2016 13:37	0.022	0.137
126	6/14/2016 13:38	0.022	0.14

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16/06/14 14:14

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-905808
Unit Firmware Ver V1.10A

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Battery Low

Site ID 18
User ID 1

Begin 6/14/2016 14:14
End 6/14/2016 14:23
Sample Period(s) 60
Number of Records 9

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100

Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/14/2016 7:26
 Peak 0
 Min 0
 Average 0

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/14/2016 14:15	0	0	0.001	0
2	6/14/2016 14:16	0	0	0	0
3	6/14/2016 14:17	0	0	0.004	0
4	6/14/2016 14:18	0	0	0	0
5	6/14/2016 14:19	0	0	0	0
6	6/14/2016 14:20	0	0	0	0
7	6/14/2016 14:21	0	0	0.001	0
8	6/14/2016 14:22	0	0	0.002	0
9	6/14/2016 14:23	0	0	0.004	0

Peak 0 0 0.004 0
 Min 0 0 0 0
 Average 0 0 0.001 0

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/14/2016 14:15	0	---
2	6/14/2016 14:16	0	---
3	6/14/2016 14:17	0	---
4	6/14/2016 14:18	0	---
5	6/14/2016 14:19	0	---
6	6/14/2016 14:20	0	---
7	6/14/2016 14:21	0	---
8	6/14/2016 14:22	0	---
9	6/14/2016 14:23	0	---

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16/06/15 08:39

Summary

Unit Name MiniRAE 3000(PGM-7320)
 Unit SN 592-905808
 Unit Firmware Ver V1.10A

Running Mode Search Mode
 Measure Type Min; Avg; Max; Real
 Datalog Mode Continuous
 Datalog Type Manual
 Diagnostic Mode No
 Stop Reason Stop by User

Site ID 20
 User ID 1

Begin 6/15/2016 8:39
 End 6/15/2016 8:57
 Sample Period(s) 60
 Number of Records 18

Sensor VOC(ppm)
 Span 100
 Span 2 N/A
 Low Alarm 50
 High Alarm 100
 Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/15/2016 7:55
 Peak 0
 Min 0
 Average 0

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/15/2016 8:40	0	0	0	0
2	6/15/2016 8:41	0	0	0	0
3	6/15/2016 8:42	0	0	0	0
4	6/15/2016 8:43	0	0	0	0
5	6/15/2016 8:44	0	0	0	0
6	6/15/2016 8:45	0	0	0	0

7	6/15/2016 8:46	0	0	0	0
8	6/15/2016 8:47	0	0	0	0
9	6/15/2016 8:48	0	0	0	0
10	6/15/2016 8:49	0	0	0	0
11	6/15/2016 8:50	0	0	0	0
12	6/15/2016 8:51	0	0	0	0
13	6/15/2016 8:52	0	0	0	0
14	6/15/2016 8:53	0	0	0	0
15	6/15/2016 8:54	0	0	0	0
16	6/15/2016 8:55	0	0	0	0
17	6/15/2016 8:56	0	0	0	0
18	6/15/2016 8:57	0	0	0	0

Peak 0 0 0 0
Min 0 0 0 0
Average 0 0 0 0

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/15/2016 8:40	0	---
2	6/15/2016 8:41	0	---
3	6/15/2016 8:42	0	---
4	6/15/2016 8:43	0	---
5	6/15/2016 8:44	0	---
6	6/15/2016 8:45	0	---
7	6/15/2016 8:46	0	---
8	6/15/2016 8:47	0	---
9	6/15/2016 8:48	0	---
10	6/15/2016 8:49	0	---
11	6/15/2016 8:50	0	---
12	6/15/2016 8:51	0	---
13	6/15/2016 8:52	0	---
14	6/15/2016 8:53	0	---
15	6/15/2016 8:54	0	0
16	6/15/2016 8:55	0	0
17	6/15/2016 8:56	0	0
18	6/15/2016 8:57	0	0

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16/06/15 09:26

Summary

Unit Name MiniRAE 3000(PGM-7320)
 Unit SN 592-905808
 Unit Firmware Ver V1.10A

 Running Mode Search Mode
 Measure Type Min; Avg; Max; Real
 Datalog Mode Continuous
 Datalog Type Manual
 Diagnostic Mode No
 Stop Reason Stop by User

 Site ID 21
 User ID 1

 Begin 6/15/2016 9:26
 End 6/15/2016 10:31
 Sample Period(s) 60
 Number of Records 64

 Sensor VOC(ppm)
 Span 100
 Span 2 N/A
 Low Alarm 50
 High Alarm 100
 Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/15/2016 7:55
 Peak 0.032
 Min 0
 Average 0.006

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/15/2016 9:27	0	0.001	0.015	0.003
2	6/15/2016 9:28	0	0.002	0.017	0.005
3	6/15/2016 9:29	0	0.001	0.01	0.01
4	6/15/2016 9:30	0.011	0.019	0.04	0.022
5	6/15/2016 9:31	0.011	0.022	0.042	0.016
6	6/15/2016 9:32	0.014	0.018	0.027	0.014
7	6/15/2016 9:33	0	0.005	0.014	0
8	6/15/2016 9:34	0	0.011	0.024	0.009
9	6/15/2016 9:35	0	0.009	0.029	0.006
10	6/15/2016 9:36	0.008	0.015	0.026	0.011

11	6/15/2016 9:37	0	0.002	0.014	0.011
12	6/15/2016 9:38	0	0.009	0.021	0.011
13	6/15/2016 9:39	0	0.007	0.022	0.015
14	6/15/2016 9:40	0	0.006	0.025	0.002
15	6/15/2016 9:41	0	0.001	0.012	0
16	6/15/2016 9:42	0	0	0	0
17	6/15/2016 9:43	0	0.001	0.012	0
18	6/15/2016 9:44	0	0.005	0.019	0.018
19	6/15/2016 9:45	0	0.003	0.019	0
20	6/15/2016 9:46	0	0.002	0.014	0
21	6/15/2016 9:47	0	0.002	0.022	0.015
22	6/15/2016 9:48	0	0.002	0.016	0.016
23	6/15/2016 9:49	0	0.003	0.015	0
24	6/15/2016 9:50	0	0	0.008	0
25	6/15/2016 9:51	0	0.003	0.02	0
26	6/15/2016 9:52	0	0.01	0.029	0
27	6/15/2016 9:53	0	0	0.003	0
28	6/15/2016 9:54	0	0.013	0.023	0.005
29	6/15/2016 9:55	0	0.001	0.01	0
30	6/15/2016 9:56	0	0.001	0.011	0.002
31	6/15/2016 9:57	0	0.002	0.008	0
32	6/15/2016 9:58	0	0.004	0.018	0
33	6/15/2016 9:59	0	0.001	0.012	0
34	6/15/2016 10:00	0	0.002	0.008	0.007
35	6/15/2016 10:01	0	0.002	0.011	0.002
36	6/15/2016 10:02	0	0.003	0.02	0.011
37	6/15/2016 10:03	0	0.007	0.02	0.014
38	6/15/2016 10:04	0	0.005	0.022	0.005
39	6/15/2016 10:05	0	0.004	0.015	0.003
40	6/15/2016 10:06	0	0.001	0.009	0.005
41	6/15/2016 10:07	0	0.001	0.005	0
42	6/15/2016 10:08	0	0.002	0.012	0
43	6/15/2016 10:09	0	0.001	0.008	0.001
44	6/15/2016 10:10	0	0.004	0.015	0.001
45	6/15/2016 10:11	0	0	0.003	0.003
46	6/15/2016 10:12	0.004	0.011	0.021	0.006
47	6/15/2016 10:13	0	0.007	0.016	0.016
48	6/15/2016 10:14	0	0.008	0.015	0.01
49	6/15/2016 10:15	0	0.003	0.012	0
50	6/15/2016 10:16	0	0.002	0.011	0.011
51	6/15/2016 10:17	0.001	0.006	0.017	0.014
52	6/15/2016 10:18	0	0.008	0.021	0
53	6/15/2016 10:19	0	0.006	0.015	0.011
54	6/15/2016 10:20	0	0.009	0.023	0.02
55	6/15/2016 10:21	0	0.008	0.029	0.002
56	6/15/2016 10:22	0.002	0.005	0.017	0.004
57	6/15/2016 10:23	0	0.003	0.009	0.001

58	6/15/2016 10:24	0	0.005	0.023	0.001
59	6/15/2016 10:25	0	0	0.001	0.001
60	6/15/2016 10:26	0.001	0.014	0.032	0.032
61	6/15/2016 10:27	0.003	0.013	0.04	0.012
62	6/15/2016 10:28	0.002	0.016	0.024	0.005
63	6/15/2016 10:29	0	0.008	0.024	0.003
64	6/15/2016 10:30	0.002	0.008	0.02	0.005

Peak	0.014	0.022	0.042	0.032
Min	0	0	0	0
Average	0.001	0.006	0.017	0.006

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/15/2016 9:27	0	---
2	6/15/2016 9:28	0	---
3	6/15/2016 9:29	0	---
4	6/15/2016 9:30	0	---
5	6/15/2016 9:31	0	---
6	6/15/2016 9:32	0	---
7	6/15/2016 9:33	0	---
8	6/15/2016 9:34	0	---
9	6/15/2016 9:35	0	---
10	6/15/2016 9:36	0	---
11	6/15/2016 9:37	0	---
12	6/15/2016 9:38	0	---
13	6/15/2016 9:39	0	---
14	6/15/2016 9:40	0	---
15	6/15/2016 9:41	0	0.009
16	6/15/2016 9:42	0	0.009
17	6/15/2016 9:43	0	0.008
18	6/15/2016 9:44	0	0.009
19	6/15/2016 9:45	0	0.008
20	6/15/2016 9:46	0	0.006
21	6/15/2016 9:47	0	0.007
22	6/15/2016 9:48	0	0.008
23	6/15/2016 9:49	0	0.007
24	6/15/2016 9:50	0	0.007
25	6/15/2016 9:51	0	0.006
26	6/15/2016 9:52	0	0.005
27	6/15/2016 9:53	0	0.004
28	6/15/2016 9:54	0	0.004
29	6/15/2016 9:55	0	0.004
30	6/15/2016 9:56	0	0.004

31	6/15/2016 9:57	0	0.004
32	6/15/2016 9:58	0	0.004
33	6/15/2016 9:59	0	0.003
34	6/15/2016 10:00	0	0.003
35	6/15/2016 10:01	0	0.003
36	6/15/2016 10:02	0	0.003
37	6/15/2016 10:03	0	0.003
38	6/15/2016 10:04	0	0.003
39	6/15/2016 10:05	0	0.003
40	6/15/2016 10:06	0	0.004
41	6/15/2016 10:07	0	0.004
42	6/15/2016 10:08	0	0.004
43	6/15/2016 10:09	0	0.003
44	6/15/2016 10:10	0	0.003
45	6/15/2016 10:11	0.001	0.003
46	6/15/2016 10:12	0.001	0.004
47	6/15/2016 10:13	0.001	0.005
48	6/15/2016 10:14	0.001	0.006
49	6/15/2016 10:15	0.001	0.005
50	6/15/2016 10:16	0.001	0.006
51	6/15/2016 10:17	0.001	0.006
52	6/15/2016 10:18	0.001	0.005
53	6/15/2016 10:19	0.001	0.005
54	6/15/2016 10:20	0.001	0.007
55	6/15/2016 10:21	0.001	0.006
56	6/15/2016 10:22	0.001	0.007
57	6/15/2016 10:23	0.001	0.007
58	6/15/2016 10:24	0.001	0.007
59	6/15/2016 10:25	0.001	0.007
60	6/15/2016 10:26	0.001	0.009
61	6/15/2016 10:27	0.001	0.009
62	6/15/2016 10:28	0.001	0.008
63	6/15/2016 10:29	0.001	0.008
64	6/15/2016 10:30	0.001	0.008

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16/06/15 11:02

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-905808
Unit Firmware Ver	V1.10A

Running Mode	Search Mode
Measure Type	Min; Avg; Max; Real

Datalog Mode Continuous
 Datalog Type Manual
 Diagnostic Mode No
 Stop Reason Stop by User

 Site ID 22
 User ID 1

Begin 6/15/2016 11:02
 End 6/15/2016 16:28
 Sample Period(s) 60
 Number of Records 91

Sensor VOC(ppm)
 Span 100
 Span 2 N/A
 Low Alarm 50
 High Alarm 100
 Over Alarm 15000
 STEL Alarm 25
 TWA Alarm 10
 Measurement Gas Isobutene
 Calibration Time 6/15/2016 7:55
 Peak 0.256
 Min 0
 Average 0.059

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/15/2016 11:03	0	0	0	0
2	6/15/2016 11:04	0	0	0.011	0
3	6/15/2016 11:05	0	0	0	0
4	6/15/2016 11:06	0	0	0	0
5	6/15/2016 11:07	0	0	0	0
6	6/15/2016 11:08	0	0	0	0
7	6/15/2016 11:09	0	0	0.001	0
8	6/15/2016 11:10	0	0	0.003	0
9	6/15/2016 11:11	0	0	0	0
10	6/15/2016 11:12	0	0	0.006	0.005
11	6/15/2016 11:13	0	0.002	0.017	0
12	6/15/2016 11:14	0	0	0.005	0
13	6/15/2016 11:15	0	0.001	0.007	0
14	6/15/2016 11:16	0	0.003	0.012	0
15	6/15/2016 11:17	0	0	0	0
16	6/15/2016 11:18	0	0.002	0.01	0.008

17	6/15/2016 11:19	0	0.001	0.01	0.008
18	6/15/2016 11:20	0	0.005	0.011	0
19	6/15/2016 11:21	0	0	0	0
20	6/15/2016 11:22	0	0	0.008	0.008
21	6/15/2016 11:23	0	0	0.011	0
22	6/15/2016 11:24	0	0	0	0
23	6/15/2016 11:25	0	0	0.003	0
24	6/15/2016 11:26	0	0	0.006	0.003
25	6/15/2016 11:27	0	0.001	0.01	0.006
26	6/15/2016 11:28	0	0.001	0.01	0
27	6/15/2016 11:29	0	0	0	0
28	6/15/2016 11:30	0	0	0.004	0.002
29	6/15/2016 11:31	0.001	0.022	0.037	0.032
30	6/15/2016 11:32	0.007	0.016	0.03	0.013
31	6/15/2016 11:33	0	0.009	0.021	0
32	6/15/2016 11:34	0	0.001	0.013	0
33	6/15/2016 11:35	0	0.002	0.01	0.004
34	6/15/2016 11:36	0	0.005	0.025	0.004
35	6/15/2016 11:37	0	0.001	0.014	0.001
36	6/15/2016 11:38	0	0.002	0.017	0
37	6/15/2016 11:39	0	0	0.005	0.001
38	6/15/2016 11:40	0	0.003	0.011	0.011
39	6/15/2016 11:41	0	0.001	0.012	0
40	6/15/2016 11:42	0	0.008	0.017	0.012
41	6/15/2016 11:43	0.001	0.016	0.029	0.029
42	6/15/2016 11:44	0	0.012	0.028	0
43	6/15/2016 11:45	0	0.017	0.036	0.016
44	6/15/2016 11:46	0.018	0.048	0.075	0.058
45	6/15/2016 11:47	0.029	0.045	0.063	0.037
46	6/15/2016 11:48	0.005	0.017	0.04	0.037
47	6/15/2016 11:49	0.023	0.042	0.055	0.042
48	6/15/2016 11:50	0.023	0.06	0.083	0.07
49	6/15/2016 11:51	0.026	0.045	0.071	0.052
50	6/15/2016 11:52	0.026	0.06	0.084	0.064
51	6/15/2016 11:53	0.032	0.058	0.081	0.033
52	6/15/2016 11:54	0.021	0.041	0.066	0.042
53	6/15/2016 11:55	0.03	0.053	0.087	0.037
54	6/15/2016 11:56	0.031	0.055	0.085	0.085
55	6/15/2016 11:57	0.026	0.055	0.087	0.052
56	6/15/2016 11:58	0.048	0.086	0.117	0.048
57	6/15/2016 11:59	0.037	0.057	0.085	0.065
58	6/15/2016 12:00	0.044	0.073	0.087	0.066
59	6/15/2016 12:01	0.031	0.055	0.096	0.053
60	6/15/2016 12:02	0.039	0.063	0.098	0.047
61	6/15/2016 12:03	0.045	0.073	0.1	0.1
62	6/15/2016 12:04	0.061	0.092	0.119	0.088
63	6/15/2016 12:05	0.046	0.062	0.089	0.076

64	6/15/2016 12:06	0.041	0.054	0.078	0.061
65	6/15/2016 12:07	0.054	0.084	0.111	0.089
66	6/15/2016 12:08	0.05	0.072	0.091	0.085
67	6/15/2016 12:09	0.06	0.082	0.111	0.091
68	6/15/2016 12:10	0.086	0.112	0.141	0.109
69	6/15/2016 12:11	0.079	0.108	0.136	0.082
70	6/15/2016 12:12	0.089	0.12	0.135	0.131
71	6/15/2016 12:13	0.124	0.149	0.162	0.129
72	6/15/2016 12:14	0.09	0.128	0.146	0.141
73	6/15/2016 12:15	0.084	0.138	0.174	0.121
74	6/15/2016 12:16	0.102	0.133	0.159	0.113
75	6/15/2016 12:17	0.123	0.147	0.167	0.167
76	6/15/2016 12:18	0.096	0.141	0.174	0.133
77	6/15/2016 12:19	0.109	0.136	0.157	0.14
78	6/15/2016 12:20	0.082	0.111	0.157	0.106
79	6/15/2016 12:21	0.099	0.126	0.149	0.129
80	6/15/2016 12:22	0.109	0.148	0.173	0.152
81	6/15/2016 12:23	0.117	0.149	0.17	0.139
82	6/15/2016 12:24	0.094	0.131	0.169	0.169
83	6/15/2016 12:25	0.095	0.135	0.179	0.179
84	6/15/2016 12:26	0.177	0.191	0.202	0.194
85	6/15/2016 12:27	0.175	0.209	0.225	0.175
86	6/15/2016 12:28	0.132	0.169	0.2	0.146
87	6/15/2016 12:29	0.154	0.186	0.212	0.205
88	6/15/2016 12:30	0.126	0.164	0.204	0.188
89	6/15/2016 12:31	0.135	0.186	0.225	0.174
90	6/15/2016 12:32	0.174	0.203	0.256	0.256
91	6/15/2016 12:33	0.241	0.259	0.275	0.243

Peak 0.241 0.259 0.275 0.256
Min 0 0 0 0
Average 0.041 0.058 0.075 0.059

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/15/2016 11:03	0	---
2	6/15/2016 11:04	0	---
3	6/15/2016 11:05	0	---
4	6/15/2016 11:06	0	---
5	6/15/2016 11:07	0	---
6	6/15/2016 11:08	0	---
7	6/15/2016 11:09	0	---
8	6/15/2016 11:10	0	---
9	6/15/2016 11:11	0	---

10	6/15/2016 11:12	0	---
11	6/15/2016 11:13	0	---
12	6/15/2016 11:14	0	---
13	6/15/2016 11:15	0	---
14	6/15/2016 11:16	0	---
15	6/15/2016 11:17	0	0
16	6/15/2016 11:18	0	0.001
17	6/15/2016 11:19	0	0.001
18	6/15/2016 11:20	0	0.001
19	6/15/2016 11:21	0	0.001
20	6/15/2016 11:22	0	0.002
21	6/15/2016 11:23	0	0.002
22	6/15/2016 11:24	0	0.002
23	6/15/2016 11:25	0	0.002
24	6/15/2016 11:26	0	0.002
25	6/15/2016 11:27	0	0.002
26	6/15/2016 11:28	0	0.002
27	6/15/2016 11:29	0	0.002
28	6/15/2016 11:30	0	0.002
29	6/15/2016 11:31	0	0.004
30	6/15/2016 11:32	0	0.005
31	6/15/2016 11:33	0	0.005
32	6/15/2016 11:34	0	0.004
33	6/15/2016 11:35	0	0.005
34	6/15/2016 11:36	0	0.005
35	6/15/2016 11:37	0	0.004
36	6/15/2016 11:38	0	0.004
37	6/15/2016 11:39	0	0.004
38	6/15/2016 11:40	0	0.005
39	6/15/2016 11:41	0	0.005
40	6/15/2016 11:42	0	0.005
41	6/15/2016 11:43	0	0.007
42	6/15/2016 11:44	0	0.007
43	6/15/2016 11:45	0	0.008
44	6/15/2016 11:46	0	0.01
45	6/15/2016 11:47	0.001	0.012
46	6/15/2016 11:48	0.001	0.014
47	6/15/2016 11:49	0.001	0.017
48	6/15/2016 11:50	0.001	0.021
49	6/15/2016 11:51	0.001	0.024
50	6/15/2016 11:52	0.001	0.029
51	6/15/2016 11:53	0.001	0.031
52	6/15/2016 11:54	0.001	0.034
53	6/15/2016 11:55	0.001	0.035
54	6/15/2016 11:56	0.001	0.041
55	6/15/2016 11:57	0.002	0.044
56	6/15/2016 11:58	0.002	0.045

57	6/15/2016 11:59	0.002	0.049
58	6/15/2016 12:00	0.002	0.053
59	6/15/2016 12:01	0.002	0.052
60	6/15/2016 12:02	0.002	0.053
61	6/15/2016 12:03	0.002	0.057
62	6/15/2016 12:04	0.003	0.06
63	6/15/2016 12:05	0.003	0.061
64	6/15/2016 12:06	0.003	0.061
65	6/15/2016 12:07	0.003	0.063
66	6/15/2016 12:08	0.003	0.066
67	6/15/2016 12:09	0.003	0.07
68	6/15/2016 12:10	0.004	0.074
69	6/15/2016 12:11	0.004	0.074
70	6/15/2016 12:12	0.004	0.079
71	6/15/2016 12:13	0.004	0.085
72	6/15/2016 12:14	0.005	0.09
73	6/15/2016 12:15	0.005	0.094
74	6/15/2016 12:16	0.005	0.098
75	6/15/2016 12:17	0.005	0.106
76	6/15/2016 12:18	0.006	0.108
77	6/15/2016 12:19	0.006	0.111
78	6/15/2016 12:20	0.006	0.113
79	6/15/2016 12:21	0.007	0.118
80	6/15/2016 12:22	0.007	0.122
81	6/15/2016 12:23	0.007	0.126
82	6/15/2016 12:24	0.008	0.131
83	6/15/2016 12:25	0.008	0.135
84	6/15/2016 12:26	0.008	0.143
85	6/15/2016 12:27	0.009	0.146
86	6/15/2016 12:28	0.009	0.147
87	6/15/2016 12:29	0.009	0.151
88	6/15/2016 12:30	0.01	0.156
89	6/15/2016 12:31	0.01	0.16
90	6/15/2016 12:32	0.011	0.166
91	6/15/2016 12:33	0.011	0.173

16/06/16 08:19

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-908497
Unit Firmware Ver V1.10C

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Auto
Diagnostic Mode No
Stop Reason Stop by User

Site ID RAE00003
User ID 1

Begin 6/16/2016 8:19
End 6/16/2016 9:01
Sample Period(s) 60
Number of Records 41

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 21.738
High Alarm 43.476
Over Alarm 15000
STEL Alarm 43.476
TWA Alarm 21.738
Measurement Gas Isobutylene
Calibration Time 6/16/2016 7:31
Peak 0.301
Min 0.153
Average 0.201

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/16/2016 8:20	0.117	0.184	0.311	0.301
2	6/16/2016 8:21	0.228	0.251	0.288	0.248
3	6/16/2016 8:22	0.113	0.176	0.249	0.22
4	6/16/2016 8:23	0.131	0.179	0.222	0.204
5	6/16/2016 8:24	0.184	0.212	0.247	0.205
6	6/16/2016 8:25	0.175	0.204	0.238	0.188
7	6/16/2016 8:26	0.145	0.172	0.2	0.16
8	6/16/2016 8:27	0.149	0.178	0.207	0.153
9	6/16/2016 8:28	0.139	0.168	0.208	0.158
10	6/16/2016 8:29	0.156	0.199	0.261	0.185
11	6/16/2016 8:30	0.169	0.195	0.213	0.2
12	6/16/2016 8:31	0.181	0.204	0.225	0.201
13	6/16/2016 8:32	0.173	0.193	0.219	0.212
14	6/16/2016 8:33	0.171	0.2	0.219	0.205
15	6/16/2016 8:34	0.153	0.205	0.23	0.168
16	6/16/2016 8:35	0.17	0.191	0.216	0.215
17	6/16/2016 8:36	0.164	0.188	0.216	0.195
18	6/16/2016 8:37	0.174	0.19	0.205	0.203
19	6/16/2016 8:38	0.193	0.205	0.216	0.215
20	6/16/2016 8:39	0.175	0.193	0.214	0.175
21	6/16/2016 8:40	0.163	0.184	0.22	0.185

22	6/16/2016 8:41	0.145	0.166	0.191	0.185
23	6/16/2016 8:42	0.185	0.196	0.222	0.204
24	6/16/2016 8:43	0.204	0.217	0.25	0.212
25	6/16/2016 8:44	0.187	0.207	0.233	0.191
26	6/16/2016 8:45	0.139	0.169	0.197	0.193
27	6/16/2016 8:46	0.164	0.191	0.211	0.18
28	6/16/2016 8:47	0.176	0.19	0.22	0.206
29	6/16/2016 8:48	0.209	0.234	0.265	0.237
30	6/16/2016 8:49	0.168	0.196	0.246	0.177
31	6/16/2016 8:50	0.18	0.208	0.235	0.201
32	6/16/2016 8:51	0.177	0.197	0.213	0.203
33	6/16/2016 8:52	0.174	0.199	0.225	0.211
34	6/16/2016 8:53	0.179	0.202	0.223	0.203
35	6/16/2016 8:54	0.201	0.218	0.241	0.235
36	6/16/2016 8:55	0.186	0.213	0.247	0.211
37	6/16/2016 8:56	0.177	0.2	0.226	0.18
38	6/16/2016 8:57	0.16	0.181	0.205	0.196
39	6/16/2016 8:58	0.164	0.184	0.199	0.19
40	6/16/2016 8:59	0.186	0.203	0.228	0.222
41	6/16/2016 9:00	0.214	0.231	0.256	0.216

Peak	0.228	0.251	0.311	0.301
Min	0.113	0.166	0.191	0.153
Average	0.171	0.197	0.228	0.201

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/16/2016 8:20	0.001	---
2	6/16/2016 8:21	0.001	---
3	6/16/2016 8:22	0.002	---
4	6/16/2016 8:23	0.002	---
5	6/16/2016 8:24	0.002	---
6	6/16/2016 8:25	0.003	---
7	6/16/2016 8:26	0.003	---
8	6/16/2016 8:27	0.003	---
9	6/16/2016 8:28	0.004	---
10	6/16/2016 8:29	0.004	---
11	6/16/2016 8:30	0.005	---
12	6/16/2016 8:31	0.005	---
13	6/16/2016 8:32	0.005	---
14	6/16/2016 8:33	0.006	---
15	6/16/2016 8:34	0.006	0.201
16	6/16/2016 8:35	0.007	0.195
17	6/16/2016 8:36	0.007	0.191
18	6/16/2016 8:37	0.008	0.19
19	6/16/2016 8:38	0.008	0.191
20	6/16/2016 8:39	0.008	0.189
21	6/16/2016 8:40	0.009	0.189
22	6/16/2016 8:41	0.009	0.19
23	6/16/2016 8:42	0.01	0.194
24	6/16/2016 8:43	0.01	0.197
25	6/16/2016 8:44	0.01	0.198
26	6/16/2016 8:45	0.011	0.197
27	6/16/2016 8:46	0.011	0.196
28	6/16/2016 8:47	0.012	0.195
29	6/16/2016 8:48	0.012	0.198

30	6/16/2016 8:49	0.012	0.198
31	6/16/2016 8:50	0.013	0.197
32	6/16/2016 8:51	0.013	0.198
33	6/16/2016 8:52	0.014	0.198
34	6/16/2016 8:53	0.014	0.198
35	6/16/2016 8:54	0.015	0.202
36	6/16/2016 8:55	0.015	0.203
37	6/16/2016 8:56	0.015	0.203
38	6/16/2016 8:57	0.016	0.202
39	6/16/2016 8:58	0.016	0.201
40	6/16/2016 8:59	0.017	0.203
41	6/16/2016 9:00	0.017	0.205

=====
16/06/16 10:11

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-908497
Unit Firmware Ver V1.10C

Running Mode Search Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Auto
Diagnostic Mode No
Stop Reason Battery Low

Site ID RAE00005
User ID 1

Begin 6/16/2016 10:11
End 6/16/2016 10:21
Sample Period(s) 60
Number of Records 9

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 21.738
High Alarm 43.476
Over Alarm 15000
STEL Alarm 43.476
TWA Alarm 21.738
Measurement Gas Isobutylene
Calibration Time 6/16/2016 7:31
Peak 0.469
Min 0.3
Average 0.393

Datalog

Index	Date/Time	VOC(ppm)			
		(Min)	(Avg)	(Max)	(Real)
1	6/16/2016 10:12	0.132	0.223	0.3	0.3
2	6/16/2016 10:13	0.286	0.315	0.345	0.31
3	6/16/2016 10:14	0.319	0.354	0.383	0.383
4	6/16/2016 10:15	0.385	0.396	0.421	0.421
5	6/16/2016 10:16	0.416	0.434	0.47	0.469
6	6/16/2016 10:17	0.431	0.44	0.465	0.445
7	6/16/2016 10:18	0.439	0.446	0.462	0.45

8	6/16/2016 10:19	0.362	0.421	0.449	0.364
9	6/16/2016 10:20	0.36	0.387	0.405	0.399

Peak 0.439 0.446 0.47 0.469
 Min 0.132 0.223 0.3 0.3
 Average 0.348 0.38 0.411 0.393

TWA/STEL

Index	Date/Time	VOC(ppm)	
		(TWA)	(STEL)
1	6/16/2016 10:12	0.001	---
2	6/16/2016 10:13	0.001	---
3	6/16/2016 10:14	0.002	---
4	6/16/2016 10:15	0.003	---
5	6/16/2016 10:16	0.004	---
6	6/16/2016 10:17	0.005	---
7	6/16/2016 10:18	0.006	---
8	6/16/2016 10:19	0.007	---
9	6/16/2016 10:20	0.007	---

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Attachment G

Laboratory Analytical Reports and Validation

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Appendix G1

Laboratory Analytical Sample Reports

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Electronic Version Provided Separately

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Appendix G2

Laboratory Investigation-Derived Waste Analytical Report

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RTI Laboratories
31628 Glendale St.
Livonia, MI 48150
TEL: (734) 422-8000
Website: www.rtilab.com

Wednesday, September 21, 2016

Devon Chicoine
AECOM Design and Consulting Services (DCS)
3101 Wilson Blvd Ste 900
Arlington, VA 22201
TEL:
FAX:

RE: Camp Hero
Work Order #: 1608800
Dear Devon Chicoine:

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

This report may only be reproduced in its entirety. Individual pages, reproduced without supporting documentation, do not contain related information and may be misinterpreted by other data reviewers.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Katherine Griffin". The signature is written in a cursive style.

Katherine Griffin
Project Manager

RTI Laboratories - Workorder Sample Summary

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services (DCS)

Project: Camp Hero

Lab Sample ID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1608800-001A	CH-ST-082016		8/20/2016 12:30 PM	8/23/2016 10:46 AM	Solid
1608800-001B	CH-ST-082016		8/20/2016 12:30 PM	8/23/2016 10:46 AM	Solid
1608800-002A	CH-WW-082016		8/20/2016 1:00 PM	8/23/2016 10:46 AM	Water
1608800-002B	CH-WW-082016		8/20/2016 1:00 PM	8/23/2016 10:46 AM	Water

Client: AECOM Design and Consulting Services (DCS)**Project:** Camp Hero

Concentrations reported with a J flag in the Qual field are values below the reporting limit (RL) but greater than the established method detection limit (MDL). There is greater uncertainty associated with these results and data should be considered as estimated. These analytes are not routinely reviewed nor narrated below as to their potential for being laboratory artifacts.

Concentrations reported with an E flag in the Qual field are values that exceed the upper quantification range. There is greater uncertainty associated with these results and data should be considered as estimated.

Any comments or problems with the analytical events associated with this report are noted below.

Sample Analysis:

Samples were analyzed at the RTI Laboratories

Ignitability - SW1010

Ignitability - SW1030

Metals, ICP/OES - SW6010C

Reactivity, Cyanide - SW7.3.3.2

Reactivity, Sulfide - SW7.3.4.2

Mercury - SW7470A

Volatile Organic Compounds - SW8260C

Semi-Volatile Organic Compounds - SW8270D

Solid pH Measured in Water at Reported Temperature - SW9045D

Analytical Comments for Test SW_6010A, Analytical Run No 88519, Batch ID 40893:

Sample 1608800-001AMS: Recoveries for Arsenic, Chromium, Lead and Selenium exceeded control limits. Suspected matrix interference for Selenium.

Sample 1608800-001AMSD: Recoveries for Chromium, Lead and Selenium exceeded control limits. Suspected matrix interference for Selenium.

Analytical Comments for Test SW_7.3.3.2, Analytical Run No 88952, Batch ID 41082:

Sample LCS-41082: Recovery for Reactive Cyanide exceeded control limits.

Sample LCSD-41082: Recovery for Reactive Cyanide exceeded control limits.

Analytical Comments for Test SW_7.3.4.2, Analytical Run No 88946, Batch ID 41082:

Sample LCS-41082: Recovery for Reactive Sulfide exceeded control limits.

Sample LCSD-41082: Recovery for Reactive Sulfide exceeded control limits.

Analytical Comments for Test SW_8270A, Analytical Run No 88679, Batch ID 40932:

Sample 1608800-001AMSD: Spike recovery for Pyridine was outside the control limits. RPDs for Hexachlorobutadiene, Hexachloroethane, Nitrobenzene, Pyridine exceeded control limits.

Analytical Comments for Test SW_8270A, Analytical Run No 88679, Batch ID R88679:

Sample CCV S8 090816: Pentachlorophenol, and Pyridine exceeded 20% criteria.

RTI Laboratories - Analytical Report

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services (DCS) Collection Date: 8/20/2016 12:30:00 PM
Project: Camp Hero
Lab ID: 1608800-001 Matrix: Solid
Client Sample ID: CH-ST-082016

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Reactivity, Corrosivity, Ignitability Reactivity, Cyanide			Method: SW7.3.3.2			Analyst: EL		
Cyanide, Reactive	1.0	UQ	1.0	1.0	1.0	mg/Kg	1	9/20/2016 5:13 PM
TCLP: RCRA Metals, VOCs, SVOCs Metals, ICP/OES			Method: SW6010C		SW3020A	Analyst: BSK		
Arsenic	37	JX	7.3	20	40	µg/L	1	8/30/2016 5:47 PM
Barium	550		72	100	200	µg/L	1	8/30/2016 5:47 PM
Cadmium	93		0.67	1.0	5.0	µg/L	1	8/30/2016 5:47 PM
Chromium	140	X	1.8	8.0	10	µg/L	1	8/30/2016 5:47 PM
Lead	93	JX	12	20	100	µg/L	1	8/30/2016 5:47 PM
Selenium	30	UX	24	30	40	µg/L	1	8/30/2016 5:47 PM
Silver	120		5.1	10	20	µg/L	1	8/30/2016 5:47 PM
TCLP: RCRA Metals, VOCs, SVOCs Mercury			Method: SW7470A		SW7470	Analyst: NK		
Mercury	0.10	U	0.052	0.10	0.20	µg/L	1	8/31/2016 1:47 PM
TCLP: RCRA Metals, VOCs, SVOCs Semi-Volatile Organic Compounds			Method: SW8270D		SW3510C	Analyst: KAL		
2,4,5-Trichlorophenol	12	U	5.6	12	25	µg/L	1	9/8/2016 12:36 PM
2,4,6-Trichlorophenol	5.0	U	4.8	5.0	20	µg/L	1	9/8/2016 12:36 PM
2,4-Dinitrotoluene	5.0	U	3.0	5.0	25	µg/L	1	9/8/2016 12:36 PM
2-Methylphenol	5.0	U	5.0	5.0	25	µg/L	1	9/8/2016 12:36 PM
3/4 Methylphenol	25	U	9.2	25	50	µg/L	1	9/8/2016 12:36 PM
Hexachlorobenzene	5.0	U	3.1	5.0	25	µg/L	1	9/8/2016 12:36 PM
Hexachlorobutadiene	5.0	U	4.3	5.0	25	µg/L	1	9/8/2016 12:36 PM
Hexachloroethane	5.0	U	3.7	5.0	25	µg/L	1	9/8/2016 12:36 PM
Nitrobenzene	12	U	6.1	12	25	µg/L	1	9/8/2016 12:36 PM
Pentachlorophenol	5.0	UY	4.6	5.0	25	µg/L	1	9/8/2016 12:36 PM
Pyridine	120	UX Y	2.6	120	50	µg/L	1	9/8/2016 12:36 PM
Surr: 2,4,6-Tribromophenol	78.0			43-140		%Rec	1	9/8/2016 12:36 PM
Surr: 2-Fluorobiphenyl	64.2			44-119		%Rec	1	9/8/2016 12:36 PM
Surr: 2-Fluorophenol	54.7			19-119		%Rec	1	9/8/2016 12:36 PM
Surr: Nitrobenzene-d5	67.6			44-120		%Rec	1	9/8/2016 12:36 PM
Surr: Phenol-d5	68.2			30-130		%Rec	1	9/8/2016 12:36 PM
Surr: Terphenyl-d14	85.9			50-134		%Rec	1	9/8/2016 12:36 PM
TCLP: RCRA Metals, VOCs, SVOCs Volatile Organic Compounds			Method: SW8260C		SW1311B	Analyst: GLQ		
1,1-Dichloroethene	120	U	96	120	200	µg/L	200	8/30/2016 4:40 PM
1,2-Dichloroethane	120	U	56	120	200	µg/L	200	8/30/2016 4:40 PM
1,4-Dichlorobenzene	120	U	96	120	200	µg/L	200	8/30/2016 4:40 PM
Benzene	120	U	77	120	200	µg/L	200	8/30/2016 4:40 PM
Carbon tetrachloride	120	U	78	120	200	µg/L	200	8/30/2016 4:40 PM
Chlorobenzene	120	U	94	120	200	µg/L	200	8/30/2016 4:40 PM
Chloroform	120	U	92	120	200	µg/L	200	8/30/2016 4:40 PM

RTI Laboratories - Analytical Report

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services (DCS) **Collection Date:** 8/20/2016 12:30:00 PM
Project: Camp Hero
Lab ID: 1608800-001 **Matrix:** Solid
Client Sample ID: CH-ST-082016

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Methyl ethyl ketone	1,000	U	450	1,000	2,000	µg/L	200	8/30/2016 4:40 PM
Tetrachloroethene	120	U	110	120	200	µg/L	200	8/30/2016 4:40 PM
Trichloroethene	120	U	96	120	200	µg/L	200	8/30/2016 4:40 PM
Vinyl chloride	120	U	100	120	200	µg/L	200	8/30/2016 4:40 PM
Surr: 4-Bromofluorobenzene	94.5			85-114		%Rec	200	8/30/2016 4:40 PM
Surr: Dibromofluoromethane	108			80-119		%Rec	200	8/30/2016 4:40 PM
Surr: Toluene-d8	101			89-112		%Rec	200	8/30/2016 4:40 PM
Reactivity, Corrosivity, Ignitability			Method: SW1030			Analyst: EL		
Ignitability	0.10	U	0.10	0.10	0.10	mm/sec	1	9/9/2016 10:00 AM
Reactivity, Corrosivity, Ignitability			Method: SW7.3.4.2			Analyst: STM		
Reactivity, Sulfide	2.0	UQ	2.0	2.0	2.0	mg/Kg	1	9/19/2016 9:02 AM
Reactivity, Corrosivity, Ignitability			Method: SW9045D			Analyst: STM		
Solid pH Measured in Water at Reported Temperature								
Hydrogen Ion (pH)	7.64					pH Units	1	8/25/2016 11:40 AM
Temperature	25.4					°C	1	8/25/2016 11:40 AM

RTI Laboratories - Analytical Report

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services (DCS) Collection Date: 8/20/2016 1:00:00 PM
 Project: Camp Hero
 Lab ID: 1608800-002 Matrix: Water
 Client Sample ID: CH-WW-082016

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Reactivity, Corrosivity, Ignitability Reactivity, Cyanide			Method: SW7.3.3.2			Analyst: EL		
Cyanide, Reactive	0.050	UQ	0.050	0.050	0.050	mg/Kg	1	9/20/2016 5:13 PM
TCLP: RCRA Metals, VOCs, SVOCs Metals, ICP/OES			Method: SW6010C		SW3020A	Analyst: BSK		
Arsenic	23	JG	7.3	20	40	µg/L	1	8/30/2016 3:10 PM
Barium	220		72	100	200	µg/L	1	8/30/2016 3:10 PM
Cadmium	1.9	J	0.67	1.0	5.0	µg/L	1	8/30/2016 3:10 PM
Chromium	98		1.8	8.0	10	µg/L	1	8/30/2016 3:10 PM
Lead	36	J	12	20	100	µg/L	1	8/30/2016 3:10 PM
Selenium	30	U	24	30	40	µg/L	1	8/30/2016 3:10 PM
Silver	10	U	5.1	10	20	µg/L	1	8/30/2016 3:10 PM
TCLP: RCRA Metals, VOCs, SVOCs Mercury			Method: SW7470A		SW7470	Analyst: NK		
Mercury	0.26		0.052	0.10	0.20	µg/L	1	8/31/2016 2:05 PM
TCLP: RCRA Metals, VOCs, SVOCs Semi-Volatile Organic Compounds			Method: SW8270D		SW3510C	Analyst: KAL		
2,4,5-Trichlorophenol	12	U	5.6	12	25	µg/L	1	9/8/2016 1:49 PM
2,4,6-Trichlorophenol	5.0	U	4.8	5.0	20	µg/L	1	9/8/2016 1:49 PM
2,4-Dinitrotoluene	5.0	U	3.0	5.0	25	µg/L	1	9/8/2016 1:49 PM
2-Methylphenol	5.0	U	5.0	5.0	25	µg/L	1	9/8/2016 1:49 PM
3/4 Methylphenol	25	U	9.2	25	50	µg/L	1	9/8/2016 1:49 PM
Hexachlorobenzene	5.0	U	3.1	5.0	25	µg/L	1	9/8/2016 1:49 PM
Hexachlorobutadiene	5.0	U	4.3	5.0	25	µg/L	1	9/8/2016 1:49 PM
Hexachloroethane	5.0	U	3.7	5.0	25	µg/L	1	9/8/2016 1:49 PM
Nitrobenzene	12	U	6.1	12	25	µg/L	1	9/8/2016 1:49 PM
Pentachlorophenol	5.0	UY	4.6	5.0	25	µg/L	1	9/8/2016 1:49 PM
Pyridine	120	UY	2.6	120	50	µg/L	1	9/8/2016 1:49 PM
Surr: 2,4,6-Tribromophenol	73.2			43-140	%Rec		1	9/8/2016 1:49 PM
Surr: 2-Fluorobiphenyl	63.5			44-119	%Rec		1	9/8/2016 1:49 PM
Surr: 2-Fluorophenol	52.0			19-119	%Rec		1	9/8/2016 1:49 PM
Surr: Nitrobenzene-d5	61.6			44-120	%Rec		1	9/8/2016 1:49 PM
Surr: Phenol-d5	72.8			30-130	%Rec		1	9/8/2016 1:49 PM
Surr: Terphenyl-d14	71.6			50-134	%Rec		1	9/8/2016 1:49 PM
TCLP: RCRA Metals, VOCs, SVOCs Volatile Organic Compounds			Method: SW8260C		SW1311B	Analyst: GLQ		
1,1-Dichloroethene	120	U	96	120	200	µg/L	200	8/30/2016 4:15 PM
1,2-Dichloroethane	120	U	56	120	200	µg/L	200	8/30/2016 4:15 PM
1,4-Dichlorobenzene	120	U	96	120	200	µg/L	200	8/30/2016 4:15 PM
Benzene	120	U	77	120	200	µg/L	200	8/30/2016 4:15 PM
Carbon tetrachloride	120	U	78	120	200	µg/L	200	8/30/2016 4:15 PM
Chlorobenzene	120	U	94	120	200	µg/L	200	8/30/2016 4:15 PM
Chloroform	120	U	92	120	200	µg/L	200	8/30/2016 4:15 PM

RTI Laboratories - Analytical Report

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services (DCS) **Collection Date:** 8/20/2016 1:00:00 PM
Project: Camp Hero
Lab ID: 1608800-002 **Matrix:** Water
Client Sample ID: CH-WW-082016

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Methyl ethyl ketone	1,000	U	450	1,000	2,000	µg/L	200	8/30/2016 4:15 PM
Tetrachloroethene	120	U	110	120	200	µg/L	200	8/30/2016 4:15 PM
Trichloroethene	120	U	96	120	200	µg/L	200	8/30/2016 4:15 PM
Vinyl chloride	120	U	100	120	200	µg/L	200	8/30/2016 4:15 PM
Surr: 4-Bromofluorobenzene	95.3			85-114		%Rec	200	8/30/2016 4:15 PM
Surr: Dibromofluoromethane	108			80-119		%Rec	200	8/30/2016 4:15 PM
Surr: Toluene-d8	101			89-112		%Rec	200	8/30/2016 4:15 PM

Reactivity, Corrosivity, Ignitability **Method: SW1010** **Analyst: EL**
Ignitability

Ignitability	70	U	70	70	70	°F	1	9/9/2016 10:00 AM
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Reactivity, Corrosivity, Ignitability **Method: SW7.3.4.2** **Analyst: STM**
Reactivity, Sulfide

Sulfide, Reactive	0.10	UQ	0.10	0.10	0.10	mg/Kg	1	9/19/2016 9:02 AM
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Reactivity, Corrosivity, Ignitability **Method: SW9045D** **Analyst: STM**
Solid pH Measured in Water at Reported Temperature

Hydrogen Ion (pH)	9.83					pH Units	1	8/25/2016 11:40 AM
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RTI Laboratories - DATES REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services (DCS)

Project: Camp Hero

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1608800-001A	CH-ST-082016	8/20/2016 12:30 PM	Solid	SW_7470A-Mercury	8/29/2016 2:00 PM	8/31/2016 7:53 AM	8/31/2016 1:47 PM
				SW_6010A-Metals, ICP/OES	8/29/2016 2:00 PM	8/30/2016 10:48 AM	8/30/2016 5:47 PM
				SW_8270A-Semi-Volatile Organic Compounds	8/29/2016 2:00 PM	9/5/2016 9:08 AM	9/8/2016 12:36 PM
				SW_8260A-Volatile Organic Compounds	8/29/2016 2:00 PM	8/29/2016 2:00 PM	8/30/2016 4:40 PM
1608800-001B	CH-ST-082016	8/20/2016 12:30 PM	Solid	SW_1030S-Ignitability		9/9/2016 10:00 AM	9/9/2016 10:00 AM
				SW_7.3.3.2-Reactivity, Cyanide		9/19/2016 10:15 AM	9/20/2016 5:13 PM
				SW_7.3.4.2-Reactivity, Sulfide		9/19/2016 10:15 AM	9/19/2016 9:02 AM
				SW_9045-Solid pH Measured in Water at Reported Temperature		8/25/2016 11:40 AM	8/25/2016 11:40 AM
1608800-002A	CH-WW-082016	8/20/2016 1:00 PM	Water	SW_7470A-Mercury	8/29/2016 2:00 PM	8/31/2016 8:38 AM	8/31/2016 2:05 PM
				SW_6010A-Metals, ICP/OES	8/29/2016 2:00 PM	8/30/2016 10:19 AM	8/30/2016 3:10 PM
				SW_8270A-Semi-Volatile Organic Compounds	8/29/2016 2:00 PM	9/5/2016 9:08 AM	9/8/2016 1:49 PM
				SW_8260A-Volatile Organic Compounds	8/29/2016 2:00 PM	8/29/2016 2:00 PM	8/30/2016 4:15 PM
1608800-002B	CH-WW-082016	8/20/2016 1:00 PM	Water	SW_1010-Ignitability		9/9/2016 10:00 AM	9/9/2016 10:00 AM
				SW_7.3.3.2-Reactivity, Cyanide		9/19/2016 10:15 AM	9/20/2016 5:13 PM
				SW_7.3.4.2-Reactivity, Sulfide		9/19/2016 10:15 AM	9/19/2016 9:02 AM
				SW_9045-Solid pH Measured in Water at Reported Temperature		8/25/2016 11:40 AM	8/25/2016 11:40 AM

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40889

Sample ID:	VOA11B LCS 40889	Samp Type:	LCS	Test Code:	SW_8260A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88509
Client ID:	LCSW	Batch ID:	40889	TestNo:	SW8260B SW1311B			Analysis Date:	8/30/2016	SeqNo:	1721665
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
1,1-Dichloroethene	2,100	200	2,000	0	104	71	131				
1,2-Dichloroethane	2,100	200	2,000	0	106	73	128				
1,4-Dichlorobenzene	2,000	200	2,000	0	99.5	79	118				
Benzene	2,100	200	2,000	0	105	79	120				
Carbon tetrachloride	2,100	200	2,000	0	107	72	136				
Chlorobenzene	2,000	200	2,000	0	99.1	82	118				
Chloroform	2,100	200	2,000	0	103	79	124				
Methyl ethyl ketone	2,000	2,000	2,000	0	99.4	56	143				J
Tetrachloroethene	2,100	200	2,000	0	103	74	129				
Trichloroethene	2,100	200	2,000	0	104	79	123				
Vinyl chloride	2,400	200	2,000	0	122	58	137				
Surr: 4-Bromofluorobenzene	12,000		12,000		102	85	114				
Surr: Dibromofluoromethane	12,000		12,000		102	80	119				
Surr: Toluene-d8	12,000		12,000		101	89	112				

Sample ID:	1608800-001AMS	Samp Type:	MS	Test Code:	SW_8260A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88509
Client ID:	CH-ST-082016MS1	Batch ID:	40889	TestNo:	SW8260B SW1311B			Analysis Date:	8/30/2016	SeqNo:	1721676
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
1,1-Dichloroethene	2,300	200	2,000	0	114	71	131				
1,2-Dichloroethane	2,300	200	2,000	0	114	73	128				
1,4-Dichlorobenzene	2,000	200	2,000	0	100	79	118				
Benzene	2,200	200	2,000	0	112	79	120				
Carbon tetrachloride	2,200	200	2,000	0	111	72	136				
Chlorobenzene	2,000	200	2,000	0	102	82	118				
Chloroform	2,200	200	2,000	0	108	79	124				
Methyl ethyl ketone	2,100	2,000	2,000	0	105	56	143				
Tetrachloroethene	2,200	200	2,000	0	110	74	129				
Trichloroethene	2,200	200	2,000	0	109	79	123				
Vinyl chloride	2,700	200	2,000	0	134	58	137				
Surr: 4-Bromofluorobenzene	12,000		12,000		100	85	114				

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40889

Sample ID:	1608800-001AMS	Samp Type:	MS	Test Code:	SW_8260A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88509	
Client ID:	CH-ST-082016MS1	Batch ID:	40889	TestNo:	SW8260B	SW1311B		Analysis Date:	8/30/2016	SeqNo:	1721676	
Analyte		Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane		13,000		12,000		106	80	119				
Surr: Toluene-d8		12,000		12,000		103	89	112				

Sample ID:	1608800-001AMSD	Samp Type:	MSD	Test Code:	SW_8260A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88509	
Client ID:	CH-ST-082016SD1	Batch ID:	40889	TestNo:	SW8260B	SW1311B		Analysis Date:	8/30/2016	SeqNo:	1721677	
Analyte		Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
1,1-Dichloroethene		2,200	200	2,000	0	108	71	131	2,286	5.39	25	
1,2-Dichloroethane		2,300	200	2,000	0	113	73	128	2,276	0.971	25	
1,4-Dichlorobenzene		2,000	200	2,000	0	102	79	118	2,006	1.88	25	
Benzene		2,200	200	2,000	0	110	79	120	2,248	1.89	25	
Carbon tetrachloride		2,100	200	2,000	0	106	72	136	2,222	4.89	25	
Chlorobenzene		2,000	200	2,000	0	101	82	118	2,040	1.28	25	
Chloroform		2,200	200	2,000	0	111	79	124	2,162	2.56	25	
Methyl ethyl ketone		2,000	2,000	2,000	0	101	56	143	2,104	4.57	25	
Tetrachloroethene		2,200	200	2,000	0	109	74	129	2,206	1.55	25	
Trichloroethene		2,100	200	2,000	0	106	79	123	2,180	2.70	25	
Vinyl chloride		2,600	200	2,000	0	128	58	137	2,688	4.57	25	
Surr: 4-Bromofluorobenzene		12,000		12,000		99.9	85	114		0	25	
Surr: Dibromofluoromethane		13,000		12,000		107	80	119		0	25	
Surr: Toluene-d8		12,000		12,000		103	89	112		0	25	

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40892

Sample ID:	MB-40892	Samp Type:	MBLK	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88514
Client ID:	PBW	Batch ID:	40892	TestNo:	SW6010B SW3020A	Analysis Date:	8/30/2016	SeqNo:	1721752		
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	10	40									JG
Barium	200	200									U
Cadmium	5.0	5.0									U
Chromium	10	10									U
Lead	100	100									U
Selenium	40	40									U
Silver	20	20									U

Sample ID:	LCS-40892	Samp Type:	LCS	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88514
Client ID:	LCSW	Batch ID:	40892	TestNo:	SW6010B SW3020A	Analysis Date:	8/30/2016	SeqNo:	1721753		
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	520	40	500.0	0	103	87	113				G
Barium	500	200	500.0	0	99.8	88	113				
Cadmium	520	5.0	500.0	0	104	88	113				
Chromium	520	10	500.0	0	105	90	113				
Lead	530	100	500.0	0	105	86	113				
Selenium	530	40	500.0	0	106	83	114				
Silver	520	20	500.0	0	104	84	115				

Sample ID:	1608902-001AMS	Samp Type:	MS	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88514
Client ID:	ZZZZZ	Batch ID:	40892	TestNo:	SW6010B SW3020A	Analysis Date:	8/30/2016	SeqNo:	1721755		
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	540	40	500.0	22.86	103	87	113				G
Barium	620	200	500.0	72.62	109	88	113				
Cadmium	540	5.0	500.0	2.090	107	88	113				
Chromium	540	10	500.0	19.43	105	90	113				
Lead	770	100	500.0	265.9	101	86	113				
Selenium	530	40	500.0	0	106	83	114				
Silver	520	20	500.0	0	104	84	115				

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40892

Sample ID:	1608902-001AMSD	Samp Type:	MSD	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88514
Client ID:	ZZZZZZ	Batch ID:	40892	TestNo:	SW6010B	SW3020A		Analysis Date:	8/30/2016	SeqNo:	1721756
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	540	40	500.0	22.86	103	87	113	537.8	0.255	20	G
Barium	620	200	500.0	72.62	109	88	113	615.8	0.571	20	
Cadmium	550	5.0	500.0	2.090	109	88	113	537.3	1.94	20	
Chromium	540	10	500.0	19.43	105	90	113	542.8	0.162	20	
Lead	780	100	500.0	265.9	103	86	113	772.0	0.905	20	
Selenium	570	40	500.0	0	114	83	114	528.5	7.66	20	Q
Silver	520	20	500.0	0	103	84	115	517.7	0.124	20	

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40893

Sample ID:	MB-40893	Samp Type:	MBLK	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88519
Client ID:	PBW	Batch ID:	40893	TestNo:	SW6010B SW3020A			Analysis Date:	8/30/2016	SeqNo:	1721786

Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	9.8	40									J
Barium	200	200									U
Cadmium	0.91	5.0									J
Chromium	10	10									U
Lead	100	100									U
Selenium	40	40									U
Silver	20	20									U

Sample ID:	LCS-40893	Samp Type:	LCS	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88519
Client ID:	LCSW	Batch ID:	40893	TestNo:	SW6010B SW3020A			Analysis Date:	8/30/2016	SeqNo:	1721787

Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	540	40	500.0	0	108	87	113				
Barium	480	200	500.0	0	96.3	88	113				
Cadmium	530	5.0	500.0	0	107	88	113				
Chromium	490	10	500.0	0	98.6	90	113				
Lead	520	100	500.0	0	103	86	113				
Selenium	550	40	500.0	0	110	83	114				
Silver	540	20	500.0	0	108	84	115				

Sample ID:	1608800-001AMS	Samp Type:	MS	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88519
Client ID:	CH-ST-082016MS1	Batch ID:	40893	TestNo:	SW6010B SW3020A			Analysis Date:	8/30/2016	SeqNo:	1721789

Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	610	40	500.0	37.47	115	87	113				Q
Barium	1,000	200	500.0	548.8	97.3	88	113				
Cadmium	580	5.0	500.0	92.68	96.8	88	113				
Chromium	580	10	500.0	138.8	88.1	90	113				Q
Lead	500	100	500.0	92.97	82.1	86	113				Q
Selenium	640	40	500.0	0	127	83	114				Q
Silver	560	20	500.0	116.6	88.5	84	115				

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40893

Sample ID:	1608800-001AMSD	Samp Type:	MSD	Test Code:	SW_6010A	Units:	µg/L	Prep Date:	8/30/2016	RunNo:	88519
Client ID:	CH-ST-082016SD1	Batch ID:	40893	TestNo:	SW6010B SW3020A			Analysis Date:	8/30/2016	SeqNo:	1721790

Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Arsenic	590	40	500.0	37.47	111	87	113	610.5	3.29	20	
Barium	1,000	200	500.0	548.8	98.9	88	113	1,035	0.762	20	
Cadmium	590	5.0	500.0	92.68	99.7	88	113	576.5	2.50	20	
Chromium	580	10	500.0	138.8	88.8	90	113	579.1	0.644	20	Q
Lead	510	100	500.0	92.97	82.5	86	113	503.4	0.400	20	Q
Selenium	610	40	500.0	0	122	83	114	637.3	3.97	20	Q
Silver	580	20	500.0	116.6	93.6	84	115	559.2	4.46	20	

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40898

Sample ID: MB-40898	Samp Type: MBLK	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: PBW	Batch ID: 40898	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722824						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	0.20	0.20									U

Sample ID: LCS-40898	Samp Type: LCS	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: LCSW	Batch ID: 40898	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722825						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	1.0	0.20	1.000	0	103	82	119				

Sample ID: 1608800-001AMS	Samp Type: MS	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: CH-ST-082016MS1	Batch ID: 40898	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722827						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	1.1	0.20	1.000	0	106	82	119				

Sample ID: 1608800-001AMSD	Samp Type: MSD	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: CH-ST-082016SD1	Batch ID: 40898	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722828						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	1.0	0.20	1.000	0	101	82	119	1.063	5.31	20	

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40899

Sample ID: MB-40899	Samp Type: MBLK	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: PBW	Batch ID: 40899	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722830						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	0.20	0.20									U

Sample ID: LCS-40899	Samp Type: LCS	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: LCSW	Batch ID: 40899	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722831						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	0.98	0.20	1.000	0	97.7	82	119				

Sample ID: 1608A52-001FMS	Samp Type: MS	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: ZZZZZ	Batch ID: 40899	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722833						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	0.70	0.20	1.000	0.1630	53.8	82	119				Q

Sample ID: 1608A52-001FMSD	Samp Type: MSD	Test Code: SW_7470A	Units: µg/L	Prep Date: 8/31/2016	RunNo: 88587						
Client ID: ZZZZZ	Batch ID: 40899	TestNo: SW7470A	SW7470	Analysis Date: 8/31/2016	SeqNo: 1722834						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Mercury	0.70	0.20	1.000	0.1630	53.4	82	119	0.7010	0.572	20	Q

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40932

Sample ID: MB-40932	Samp Type: MBLK	Test Code: SW_8270A	Units: µg/L	Prep Date: 9/5/2016	RunNo: 88679						
Client ID: PBW	Batch ID: 40932	TestNo: SW8270C	SW3510C	Analysis Date: 9/8/2016	SeqNo: 1724952						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	25	25									U
2,4,6-Trichlorophenol	20	20									U
2,4-Dinitrotoluene	25	25									U
2-Methylphenol	25	25									U
3/4 Methylphenol	50	50									U
Hexachlorobenzene	25	25									U
Hexachlorobutadiene	25	25									U
Hexachloroethane	25	25									U
Nitrobenzene	25	25									U
Pentachlorophenol	25	25									UY
Pyridine	50	50									UY
Surr: 2,4,6-Tribromophenol	92		125.0		73.4	43	140				
Surr: 2-Fluorobiphenyl	79		125.0		63.2	44	119				
Surr: 2-Fluorophenol	68		125.0		54.1	19	119				
Surr: Nitrobenzene-d5	82		125.0		65.6	44	120				
Surr: Phenol-d5	80		125.0		64.4	30	130				
Surr: Terphenyl-d14	110		125.0		87.0	50	134				

Sample ID: 1608800-001AMS	Samp Type: MS	Test Code: SW_8270A	Units: µg/L	Prep Date: 9/5/2016	RunNo: 88679						
Client ID: CH-ST-082016MS1	Batch ID: 40932	TestNo: SW8270C	SW3510C	Analysis Date: 9/8/2016	SeqNo: 1724954						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	79	25	100.0	0	79.0	53	123				
2,4,6-Trichlorophenol	78	20	100.0	0	78.1	50	125				
2,4-Dinitrotoluene	85	25	100.0	0	84.6	57	128				
2-Methylphenol	84	25	100.0	0	83.7	30	117				
3/4 Methylphenol	170	50	200.0	0	86.7	25	120				
Hexachlorobenzene	81	25	100.0	0	81.5	53	125				
Hexachlorobutadiene	51	25	100.0	0	50.7	22	124				
Hexachloroethane	55	25	100.0	0	55.0	21	115				
Nitrobenzene	79	25	100.0	0	78.8	45	121				

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40932

Sample ID:	1608800-001AMS	Samp Type:	MS	Test Code:	SW_8270A	Units:	µg/L	Prep Date:	9/5/2016	RunNo:	88679
Client ID:	CH-ST-082016MS1	Batch ID:	40932	TestNo:	SW8270C	SW3510C		Analysis Date:	9/8/2016	SeqNo:	1724954
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Pentachlorophenol	86	25	100.0	0	86.4	35	138				Y
Pyridine	52	50	100.0	0	52.4	50	130				Y
Surr: 2,4,6-Tribromophenol	110		125.0		90.6	43	140				
Surr: 2-Fluorobiphenyl	91		125.0		72.5	44	119				
Surr: 2-Fluorophenol	83		125.0		66.7	19	119				
Surr: Nitrobenzene-d5	100		125.0		81.3	44	120				
Surr: Phenol-d5	100		125.0		82.6	30	130				
Surr: Terphenyl-d14	120		125.0		94.7	50	134				

Sample ID:	1608800-001AMSD	Samp Type:	MSD	Test Code:	SW_8270A	Units:	µg/L	Prep Date:	9/5/2016	RunNo:	88679
Client ID:	CH-ST-082016SD1	Batch ID:	40932	TestNo:	SW8270C	SW3510C		Analysis Date:	9/8/2016	SeqNo:	1724955
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	69	25	100.0	0	68.8	53	123	78.95	13.7	25	
2,4,6-Trichlorophenol	66	20	100.0	0	66.2	50	125	78.10	16.6	25	
2,4-Dinitrotoluene	74	25	100.0	0	74.5	57	128	84.65	12.8	25	
2-Methylphenol	67	25	100.0	0	66.9	30	117	83.70	22.3	25	
3/4 Methylphenol	150	50	200.0	0	72.8	25	120	173.4	17.5	25	
Hexachlorobenzene	71	25	100.0	0	70.8	53	125	81.45	14.1	25	
Hexachlorobutadiene	38	25	100.0	0	38.0	22	124	50.70	28.6	25	R
Hexachloroethane	36	25	100.0	0	36.4	21	115	55.05	40.8	25	R
Nitrobenzene	60	25	100.0	0	60.2	45	121	78.80	26.7	25	R
Pentachlorophenol	74	25	100.0	0	74.3	35	138	86.40	15.1	25	Y
Pyridine	48	50	100.0	0	47.8	50	130	52.40	9.29	25	JQY
Surr: 2,4,6-Tribromophenol	95		125.0		76.4	43	140		0	25	
Surr: 2-Fluorobiphenyl	76		125.0		61.2	44	119		0	25	
Surr: 2-Fluorophenol	65		125.0		52.0	19	119		0	25	
Surr: Nitrobenzene-d5	76		125.0		61.1	44	120		0	25	
Surr: Phenol-d5	87		125.0		69.3	30	130		0	25	
Surr: Terphenyl-d14	110		125.0		86.9	50	134		0	25	

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 40932

Sample ID: LCS-40932	Samp Type: LCS	Test Code: SW_8270A	Units: µg/L	Prep Date: 9/5/2016	RunNo: 88679
Client ID: LCSW	Batch ID: 40932	TestNo: SW8270C	SW3510C	Analysis Date: 9/8/2016	SeqNo: 1724960

Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	71	25	100.0	0	70.6	53	123				
2,4,6-Trichlorophenol	75	20	100.0	0	74.6	50	125				
2,4-Dinitrotoluene	84	25	100.0	0	84.4	57	128				
2-Methylphenol	77	25	100.0	0	77.4	30	117				
3/4 Methylphenol	160	50	200.0	0	81.9	25	120				
Hexachlorobenzene	78	25	100.0	0	78.2	53	125				
Hexachlorobutadiene	49	25	100.0	0	48.9	22	124				
Hexachloroethane	50	25	100.0	0	49.9	21	115				
Nitrobenzene	76	25	100.0	0	76.0	45	121				
Pentachlorophenol	63	25	100.0	0	62.6	35	138				Y
Pyridine	50	50	100.0	0	50.1	50	130				Y
Surr: 2,4,6-Tribromophenol	110		125.0		85.3	43	140				
Surr: 2-Fluorobiphenyl	90		125.0		72.3	44	119				
Surr: 2-Fluorophenol	81		125.0		64.6	19	119				
Surr: Nitrobenzene-d5	99		125.0		79.0	44	120				
Surr: Phenol-d5	99		125.0		79.0	30	130				
Surr: Terphenyl-d14	110		125.0		90.8	50	134				

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016

Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 41082

Sample ID: MB-41082	Samp Type: MBLK	Test Code: SW_7.3.3.2	Units: mg/Kg	Prep Date: 9/19/2016	RunNo: 88952						
Client ID: PBS	Batch ID: 41082	TestNo: SW7.3.3.2		Analysis Date: 9/20/2016	SeqNo: 1731055						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual

Cyanide, Reactive	1.0	1.0									U
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Sample ID: LCS-41082	Samp Type: LCS	Test Code: SW_7.3.3.2	Units: mg/Kg	Prep Date: 9/19/2016	RunNo: 88952						
Client ID: LCSS	Batch ID: 41082	TestNo: SW7.3.3.2		Analysis Date: 9/20/2016	SeqNo: 1731056						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual

Cyanide, Reactive	1.0	1.0	0.1000	0	0	80	120				QU
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Sample ID: 1608800-001BDUP	Samp Type: DUP	Test Code: SW_7.3.3.2	Units: mg/Kg	Prep Date: 9/19/2016	RunNo: 88952						
Client ID: CH-ST-082016LR1	Batch ID: 41082	TestNo: SW7.3.3.2		Analysis Date: 9/20/2016	SeqNo: 1731058						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual

Cyanide, Reactive	0.97	0.97						0	0	25	U
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Sample ID: LCSD-41082	Samp Type: LCSD	Test Code: SW_7.3.3.2	Units: mg/Kg	Prep Date: 9/19/2016	RunNo: 88952						
Client ID: LCSS02	Batch ID: 41082	TestNo: SW7.3.3.2		Analysis Date: 9/20/2016	SeqNo: 1731061						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual

Cyanide, Reactive	1.0	1.0	0.1000	0	0	80	120	0	0	25	QU
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Sample ID: MB-41082	Samp Type: MBLK	Test Code: SW_7.3.4.2	Units: mg/Kg	Prep Date: 9/19/2016	RunNo: 88946						
Client ID: PBS	Batch ID: 41082	TestNo: SW7.3.4.2		Analysis Date: 9/19/2016	SeqNo: 1731015						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual

Sulfide, Reactive	2.0	2.0									U
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Sample ID: LCS-41082	Samp Type: LCS	Test Code: SW_7.3.4.2	Units: mg/Kg	Prep Date: 9/19/2016	RunNo: 88946						
Client ID: LCSS	Batch ID: 41082	TestNo: SW7.3.4.2		Analysis Date: 9/19/2016	SeqNo: 1731016						
Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual

Sulfide, Reactive	2.0	2.0	0.4000	0	0	80	120				QU
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RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: 41082

Sample ID:	LCSD-41082	Samp Type:	LCSD	Test Code:	SW_7.3.4.2	Units:	mg/Kg	Prep Date:	9/19/2016	RunNo:	88946	
Client ID:	LCSS02	Batch ID:	41082	TestNo:	SW7.3.4.2			Analysis Date:	9/19/2016	SeqNo:	1731017	
Analyte		Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Sulfide, Reactive		2.0	2.0	0.4000	0	0	80	120	0	0	25	QU

Sample ID:	1608800-001BDUP	Samp Type:	DUP	Test Code:	SW_7.3.4.2	Units:	mg/Kg	Prep Date:	9/19/2016	RunNo:	88946	
Client ID:	CH-ST-082016LR1	Batch ID:	41082	TestNo:	SW7.3.4.2			Analysis Date:	9/19/2016	SeqNo:	1731019	
Analyte		Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Sulfide, Reactive		1.9	1.9						0	0	25	U

RTI Laboratories - QC SUMMARY REPORT

WO#: 1608800

Date Reported: 9/21/2016
Original

Client: AECOM Design and Consulting Services
(DCS)

Project: Camp Hero

Batch ID: R88731

Sample ID: **LCS-R88731** Samp Type: **LCS** Test Code: **SW_1010** Units: **°F** Prep Date: **9/9/2016** RunNo: **88731**
Client ID: **LCSS** Batch ID: **R88731** TestNo: **SW1010** Analysis Date: **9/9/2016** SeqNo: **1726005**

Analyte	Result	LOQ	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPDLimit	Qual
Ignitability	81	70	81.00	0	100	90	110				

DEFINITIONS:

DF: Dilution factor; the dilution factor applied to the prepared sample.

DL: Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known amount of target analytes to a specified amount of clean matrix and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: A duplicate LCS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

LOD: Limit of Detection; a laboratory verified concentration that can be detected at three times greater than the noise level. This concentration is equal to or greater than the DL.

LOQ: Limit of Quantitation; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below the LOQ are reported with a "J" qualifier.

MBLK: Method Blank; a sample of similar matrix that does not contain target analytes or interference that may impact the analytical results and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, used to assess and verify that the analytical process is free of contamination.

Mg/Kg or mg/L: Units of part per million (PPM) – milligram per Kilogram (W/W) or milligram per Liter (W/V).

MS: Matrix Spike; prepared by adding a known amount of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: A duplicate MS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

% REC: Percent Recovery of a known spike (SPK); a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration (SPK) added to the sample. This is compared to the Low Limit and High Limit.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration. This is compared to the RPD Limit.

Qual: Qualifier that applies to the analyte reported

SPK: Spike; used in the QC section for both SPK Value and SPK Ref Val

Ug/Kg or ug/L: Units of part per billion (PPB) – microgram per Kilogram (W/W) or microgram per Liter (W/V).

QUALIFIERS:

*: Reported value exceeds the maximum allowed concentration by regulation or permit.

B: Analyte detected in the associated Method Blank at a concentration greater than 1/2 the LOQ

G: ICB/CCB result is greater than the MDL

H: Holding time for preparation or analysis has been exceeded

J: Estimated result. Greater uncertainty is associated with this result and data reported is estimated.

M: Manual Integration used to determine area response

P: Second column RPD exceeds 40%

Q: % REC exceeded control limits. When applied to sample analytes - denotes an associated LCS recovery that exceeded control limits.

R: % RPD exceeds control limits

T: MBLK result is greater than 1/2 of the LOQ

U: The analyte concentration is less than the DL. The result is reported as less than the LOD

X: Matrix spike recovery for the noted analyte exceeded control limits. Applied to the MS/MSD parent sample.

Y: Percent Difference/Drift in the associated CCV exceeded acceptance criteria.

Z: Percent Difference/Drift in the associated ICV exceeded acceptance criteria.

1608800

Chain of Custody

AECOM
 3101 Wilson Blvd Suite 900
 Arlington, Virginia 22201
 Phone No. (703) 682-4900; Fax No. (703) 682-4901

AECOM

PAGE 1 OF 1

Laboratory RTI Laboratories					Project Name Camp Hero					Analysis										Chain of Custody					
Address 31628 Glendale Street					Point of Contact / Phone No. Devon Chicoine (703) 682-9069					TCLP - 1311-028514-R5.1 Dignitability - 1010A-051812-R3 Accessibility - pit - 4500-H6-051912-R3 Accessibility TCLP - 1317HE-030514-R3										Batch May16					
City Livonia		State MI		Zip Code 48150	Site Contact / Phone No. Amanda Martin (434) 664-8047															Comment					
Database Information					Other Sample Information																				
LOCID	SBD	SED	SA Code	Samp No	Sample I.D.	Date	Time	Matrix	No. of Con.	Cooler No.											Comment				
					CH-ST-082016	8/22/16	1230	ST	6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
					CH-WW-082016	8/20/16	1300	WW	5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
1. Relinquished By / Company Nicole Schuman / AECOM					Date 8/22/16	Time 1400	1. Received By / Company Fedex					Date	Time												
2. Relinquished By / Company					Date	Time	2. Received By / Company Michael Schuman					Date 8/22/16	Time 1200												
3. Relinquished By / Company					Date	Time	3. Received By / Company					Date	Time												
Comments											Shipment Method/Airbill No.														

DISTRIBUTION: WHITE - Stays with sample; CANARY - Returned to Client with Report; PINK - Field Copy

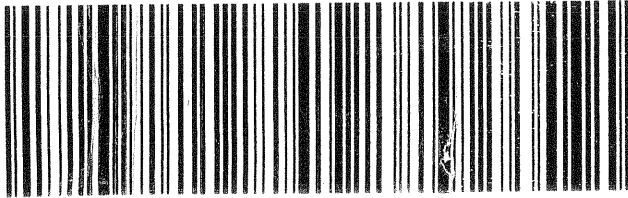
Cooler Temp Blank 3.0
 SHAFT-01

TRK# 7838 8630 6580
0201

TUE - 23 AUG 3:00P
STANDARD OVERNIGHT

ET CFAA

48150
MI-US DTW



CUSTODY SEALS

Date

8/22/10

Signature

Phil Schuber

Subject: Fwd: RE: Camp Hero - IDW
From: Kathy Griffin <kgriffin@rtlab.com>
Date: 8/15/2016 3:28 PM
To: Rachael Milksys <rmilksys@rtlab.com>, Chino Ortiz <ortiz@rtlab.com>

Good afternoon,
 May I have a hand getting this cooler out. One set of bottles for each below.
 Thanks!
 Kathy

----- Forwarded Message -----

Subject: RE: Camp Hero - IDW
Date: Mon, 15 Aug 2016 18:48:42 +0000
From: Martin, Amanda (Arlington) <Amanda.Martin@aecom.com>
To: Kathy Griffin (kgriffin@rtlab.com) <kgriffin@rtlab.com>
CC: Schulman, Nicole <nicole.schulman@aecom.com>, Masonheimer, Debbie <Debbie.Masonheimer@aecom.com>, Chicoine, Devon <Devon.Chicoine@aecom.com>

Hi Kathy,

Can you provide a set of soil and liquid IDW sampling bottles to Nicole Schulman (address below) as soon as possible? We originally were not going to sample IDW during this phase, but the client has changed their mind and wants it done ASAP. We have some bottleware but not a complete set.

Shipping Address:
 Nicole Schulman
 17 Aspen Rd.
 Rocky Point, NY 11778
 Phone - (516) 764-3792

Matrix	Analytical Group	Analytical and Preparation Method/SOP Reference	Containers (Number, Size, and Type)	Sample Volume (Units)	Preservation Requirements (Chemical, Temperature, Light Protected)	Maximum Holding Time (Preparation/ Analysis)
IDW Soil	TCLP	1311_030514_R5.1 1311ZHE_030514_R3.1	2- 8 oz. (250 ml) Glass	200 g	<6° C, light protected	14 days to TCLP preparation - analysis holding times according to analytical group for waters above.
	Ignitability	1010A_051812_R3	1-125 ml Glass	100 g	<6° C, light protected	Not established
	Corrosivity - pH Reactivity	4500 H-B_050912_R3 No method available	1-125 ml Glass 1-125 ml Glass	50 g 100 g	<6° C <6° C	Not established Not established
IDW Water	TCLP	1311_030514_R5.1 1311ZHE_030514_R3.1	2 L Amber glass	2000ml	<6° C, light protected	14 days to TCLP preparation - analysis holding times according to analytical group for waters above.
	Ignitability	1010A_051812_R3	1-125 ml Glass	100 ml	<6° C, light protected	Not established
	Corrosivity - pH Reactivity	4500 H-B_050912_R3 No method available	1-125 ml Plastic 1-125 ml Glass	50 ml 100 ml	<6° C <6° C	Not established Not established

Thank you,
 Amanda

Amanda Martin
 Environmental Engineer II
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From: Schulman, Nicole
Sent: Monday, August 08, 2016 10:15 PM
To: Martin, Amanda (Arlington)
Subject: RE: Camp Hero - IDW

Hi Amanda,

I've been put on a long term project but I can probably make it there. There's a chance I might do it during a weekend if I sample it on a Saturday or Sunday do you know the hold time? could I keep it cold until I ship on Monday? Do I have all the bottleware that I will need for this? If so do you think that the bottleware is still good or do you think maybe I should get new bottles? Also do you happen to remember the gate code so that I don't have to try and explain to the guard what I'm up too lol

Thanks,
Nicole

From: Martin, Amanda (Arlington)
Sent: Monday, August 08, 2016 10:03 AM
To: Schulman, Nicole
Cc: McGuinness, Brendan; MacEwan, Mark; Donahue, Megan; Chicoine, Devon
Subject: Camp Hero - IDW

Hi Nicole,

Hope you are doing well!

The USACE has decided that we need to sample the liquid and solid IDW at Camp Hero. Are you available to conduct the sampling sometime in the near future?

Thanks,
Amanda

Amanda Martin
Environmental Engineer II
Design and Consulting Services (DCS)
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Appendix G3

Data Validation Reports

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Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606306		
Date(s) of Collection:	June 7 th , 2016		
Number/Type Samples & Analyses:	1 Groundwater sample for PAH, PCB, and Metals		
Senior Data Reviewer:	Naoum Tavantzis AECOM/Baltimore, MD		
Completed:	August 29 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for the groundwater data included in Sample Delivery Group (SDG) 1606306. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- NA Laboratory duplicate results
- NA Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR. ADR Discrepancy reports are included in Attachment B.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606306

Laboratory: RTILABS

EDD Filename: EDD_1606306_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:	Water						

Sample ID:H11-SB02-GW Collected: 6/7/2016 6:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	22	J	2.5	LOD	50	LOQ	ug/L	J	RI
NICKEL	7.5	J	0.50	LOD	10	LOQ	ug/L	J	RI

Sample ID:H11-SB02-GW Collected: 6/7/2016 6:00:00 PM Analysis Type: Reanalysis-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	9600	J	2500	LOD	10000	LOQ	ug/L	J	RI

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Water						

Sample ID:H11-SB02-GW Collected: 6/7/2016 6:00:00 PM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	8.0		0.39	LOD	0.39	LOQ	ug/L	J	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606306

Laboratory: RTILABS

EDD Filename: EDD_1606306_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

9/9/2016 3:10:43 PM

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Data Review Summary

Lab Reporting Batch ID: 1606306

EDD Filename: EDD_1606306_SEDD_2a_v7_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606306

Laboratory: RTILABS

EDD Filename: EDD_1606306_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40174	7/25/2016 11:49:09 AM	ALUMINUM NICKEL	9.8 ug/L 0.23 ug/L	H11-SB02-GW

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606306

Laboratory: RTILABS

EDD Filename: EDD_1606306_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Water

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCSD-40121 (H11-SB02-GW)	BENZO(K)FLUORANTHENE	-	-	54.00-125.00	21.79 (20.00)	BENZO(K)FLUORANTHENE	J (all detects) UJ (all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606306

Laboratory: RTILABS

EDD Filename: EDD_1606306_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H11-SB02-GW	NICKEL	J	7.5	10	LOQ	ug/L	J (all detects)
	SODIUM	J	9600	10000	LOQ	ug/L	
	ZINC	J	22	50	LOQ	ug/L	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606337		
Date(s) of Collection:	June 8 th , 2016		
Number/Type Samples & Analyses:	26 groundwater samples and 1 trip blank for a project-specific list of VOCs, PAHs, Lead, PCBs		
Data Reviewer:	Zachary Neigh AECOM/Baltimore MD		
Completed:	August 29 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606337. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR, Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:	Water						

Sample ID:H11-SB01-GW Collected: 6/8/2016 2:00:00 PM Analysis Type: Dilution-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	13000	J	2500	LOD	20000	LOQ	ug/L	J	RI
COBALT	20	J	10	LOD	100	LOQ	ug/L	J	RI
MAGNESIUM	9800	J	2500	LOD	10000	LOQ	ug/L	J	RI
NICKEL	56	J	10	LOD	200	LOQ	ug/L	J	RI
POTASSIUM	7400	J	2500	LOD	10000	LOQ	ug/L	J	RI
CHROMIUM	180	JG	10	LOD	200	LOQ	ug/L	J	RI

Sample ID:H11-SB01-GW Collected: 6/8/2016 2:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.45	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
SELENIUM	1.9	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.91	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID:WDS-SB22-GW Collected: 6/8/2016 3:00:00 PM Analysis Type: Dilution-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	52000		2500	LOD	20000	LOQ	ug/L	J	Fd
CHROMIUM	340	G	10	LOD	200	LOQ	ug/L	J	Fd
COBALT	140		10	LOD	100	LOQ	ug/L	J	Fd
COPPER	220		10	LOD	100	LOQ	ug/L	J	Fd
IRON	92000		2500	LOD	4000	LOQ	ug/L	J	Fd
MAGNESIUM	15000		2500	LOD	10000	LOQ	ug/L	J	Fd
MANGANESE	6800		10	LOD	100	LOQ	ug/L	J	Fd
NICKEL	100	J	10	LOD	200	LOQ	ug/L	J	RI, Fd
POTASSIUM	13000		2500	LOD	10000	LOQ	ug/L	J	Fd
VANADIUM	280		10	LOD	80	LOQ	ug/L	J	Fd

Sample ID:WDS-SB22-GW Collected: 6/8/2016 3:00:00 PM Analysis Type: Dilution-2/TOT Dilution: 2000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	280000		1000	LOD	20000	LOQ	ug/L	J	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A	Matrix: Water

Sample ID:WDS-SB22-GW Collected: 6/8/2016 3:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	16	G	1.0	LOD	1.5	LOQ	ug/L	J	Fd
BARIUM	1600		0.50	LOD	25	LOQ	ug/L	J	Fd
CADMIUM	4.8		0.50	LOD	1.0	LOQ	ug/L	J	Fd
LEAD	120		0.50	LOD	1.0	LOQ	ug/L	J	Fd
SELENIUM	7.0		2.5	LOD	5.0	LOQ	ug/L	J	Fd
THALLIUM	0.90	J	0.50	LOD	2.0	LOQ	ug/L	J	RI, Fd
ZINC	270		2.5	LOD	50	LOQ	ug/L	J	Fd

Sample ID:WDS-SB22-GW Collected: 6/8/2016 3:00:00 PM Analysis Type: Reanalysis-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	16	J	10	LOD	20	LOQ	ug/L	J	RI, Fd

Sample ID:WDS-SB22-GW DUP Collected: 6/8/2016 3:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.76	JG	1.0	LOD	1.5	LOQ	ug/L	J	RI, Fd
BARIUM	49		0.50	LOD	25	LOQ	ug/L	J	Fd
CADMIUM	0.50	U	0.50	LOD	1.0	LOQ	ug/L	UJ	Fd
CALCIUM	12000		120	LOD	1000	LOQ	ug/L	J	Fd
CHROMIUM	11	G	0.50	LOD	10	LOQ	ug/L	J	Fd
COBALT	3.6	J	0.50	LOD	5.0	LOQ	ug/L	J	RI, Fd
COPPER	4.8	J	0.50	LOD	5.0	LOQ	ug/L	J	RI, Fd
IRON	4600		120	LOD	200	LOQ	ug/L	J	Fd
LEAD	4.4		0.50	LOD	1.0	LOQ	ug/L	J	Fd
MAGNESIUM	4400		120	LOD	500	LOQ	ug/L	J	Fd
MANGANESE	180		0.50	LOD	5.0	LOQ	ug/L	J	Fd
NICKEL	5.0	J	0.50	LOD	10	LOQ	ug/L	J	RI, Fd
POTASSIUM	2500		120	LOD	500	LOQ	ug/L	J	Fd
SELENIUM	2.5	U	2.5	LOD	5.0	LOQ	ug/L	UJ	Fd
THALLIUM	0.50	U	0.50	LOD	2.0	LOQ	ug/L	UJ	Fd
VANADIUM	11		0.50	LOD	4.0	LOQ	ug/L	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:	Water						

Sample ID: WDS-SB22-GW DUP Collected: 6/8/2016 3:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	11	J	2.5	LOD	50	LOQ	ug/L	J	RI, Fd

Sample ID: WDS-SB22-GW DUP Collected: 6/8/2016 3:00:00 PM Analysis Type: Reanalysis-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	15000		50	LOD	1000	LOQ	ug/L	J	Fd
BERYLLIUM	10	U	10	LOD	20	LOQ	ug/L	UJ	Fd

6/8/2016 11:00:00
Sample ID: WDS-SB25-GW Collected: AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.46	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.20	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

6/8/2016 10:05:00
Sample ID: WDS-SB26-GW Collected: AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.7		1.0	LOD	1.5	LOQ	ug/L	J	Fd
NICKEL	7.4	J	0.50	LOD	10	LOQ	ug/L	J	RI
ZINC	22	J	2.5	LOD	50	LOQ	ug/L	J	RI

6/8/2016 10:05:00
Sample ID: WDS-SB26-GW DUP Collected: AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	2.5		1.0	LOD	1.5	LOQ	ug/L	J	Fd
NICKEL	8.3	J	0.50	LOD	10	LOQ	ug/L	J	RI
ZINC	23	J	2.5	LOD	50	LOQ	ug/L	J	RI

6/8/2016 10:00:00
Sample ID: WDS-SB27-GW Collected: AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.43	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.86	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A	Matrix: Water

Method Category:	METALS	
Method:	6020A-SA	Matrix: Water

Sample ID: H11-SB01-GW		Collected: 6/8/2016 2:00:00 PM		Analysis Type: Initial/TOT		Dilution: 5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.58	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb
SILVER	0.57	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB22-GW		Collected: 6/8/2016 3:00:00 PM		Analysis Type: Initial/TOT		Dilution: 5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.3	JG	0.75	LOD	2.5	LOQ	ug/L	UJ	Mb, Fd
SILVER	0.62	J	0.50	LOD	1.5	LOQ	ug/L	J	RI, Fd

Sample ID: WDS-SB22-GW DUP		Collected: 6/8/2016 3:00:00 PM		Analysis Type: Initial/TOT		Dilution: 5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.64	JG	0.75	LOD	2.5	LOQ	ug/L	UJ	Mb, Fd
SILVER	0.50	U	0.50	LOD	1.5	LOQ	ug/L	UJ	Fd

Sample ID: WDS-SB25-GW		Collected: 6/8/2016 11:00:00 AM		Analysis Type: Initial/TOT		Dilution: 5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.1	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb
SILVER	0.28	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB26-GW		Collected: 6/8/2016 10:05:00 AM		Analysis Type: Initial/TOT		Dilution: 5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.44	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb

Sample ID: WDS-SB26-GW DUP		Collected: 6/8/2016 10:05:00 AM		Analysis Type: Initial/TOT		Dilution: 5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.34	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-SA	Matrix:		Water					

Sample ID: WDS-SB27-GW **Collected:** 6/8/2016 10:00:00 AM **Analysis Type:** Initial/TOT **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.84	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb
SILVER	0.24	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Method Category:	SVOA								
Method:	8270D SIM	Matrix:		Water					

Sample ID: WDS-SB22-GW **Collected:** 6/8/2016 3:00:00 PM **Analysis Type:** Initial/TOT-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
2-METHYLNAPHTHALENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
ACENAPHTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
ACENAPHTHYLENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(G,H,I)PERYLENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
CHRYSENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
DIBENZO(A,H)ANTHRACENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
FLUORENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
NAPHTHALENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
PHENANTHRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
PYRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr

Sample ID: WDS-SB22-GW DUP **Collected:** 6/8/2016 3:00:00 PM **Analysis Type:** Initial/TOT-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Water

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
ACENAPHTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
ACENAPHTHYLENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(G,H,I)PERYLENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
CHRYSENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
DIBENZO(A,H)ANTHRACENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
FLUORENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
NAPHTHALENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
PHENANTHRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr
PYRENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Surr

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
2-METHYLNAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ACENAPHTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ACENAPHTHYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr, Fd
BENZO(G,H,I)PERYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
CHRYSENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr, Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Water

Sample ID: WDS-SB26-GW		6/8/2016 10:05:00 Collected: AM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIBENZO(A,H)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr, Fd
FLUORENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
NAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr, Fd
PHENANTHRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr, Fd
PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr, Fd

Sample ID: WDS-SB26-GW DUP		6/8/2016 10:05:00 Collected: AM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
2-METHYLNAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ACENAPHTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ACENAPHTHYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.025		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
BENZO(G,H,I)PERYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
CHRYSENE	0.020		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
DIBENZO(A,H)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.043		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
FLUORENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
NAPHTHALENE	0.021		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
PHENANTHRENE	0.021		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
PYRENE	0.032		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Water						

Sample ID: WDS-SB22-GW		Collected: 6/8/2016 3:00:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.3	UQ	2.3	LOD	23	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB22-GW		Collected: 6/8/2016 3:00:00 PM			Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.93	UQ	0.93	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB22-GW DUP		Collected: 6/8/2016 3:00:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.5	UQ	2.5	LOD	25	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB22-GW DUP		Collected: 6/8/2016 3:00:00 PM			Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.0	UQ	1.0	LOD	5.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB25-GW		Collected: 6/8/2016 11:00:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.5	UQ	2.5	LOD	25	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB25-GW		Collected: 6/8/2016 11:00:00 AM			Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.0	UQ	1.0	LOD	5.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB26-GW		Collected: 6/8/2016 10:05:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.3	UQ	2.3	LOD	23	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Water						

Sample ID: WDS-SB26-GW	Collected: 6/8/2016 10:05:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
N-NITROSODIMETHYLAMINE	0.93	UQ	0.93	LOD	4.7	LOQ	ug/L	UJ	Lcs	

Sample ID: WDS-SB26-GW DUP	Collected: 6/8/2016 10:05:00 AM			Analysis Type: Initial/TOT-ACID				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs	

Sample ID: WDS-SB26-GW DUP	Collected: 6/8/2016 10:05:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
N-NITROSODIMETHYLAMINE	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs	

Sample ID: WDS-SB27-GW	Collected: 6/8/2016 10:00:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
N-NITROSODIMETHYLAMINE	2.5	UQ	2.5	LOD	12	LOQ	ug/L	UJ	Lcs	

Method Category:	VOA									
Method:	8260C			Matrix: Water						

Sample ID: TB-GW-060816-01	Collected: 6/8/2016 9:00:00 AM			Analysis Type: Initial/TOT				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACETONE	2.5	J	0.60	LOD	10	LOQ	ug/L	J	RI	

Sample ID: WDS-SB22-GW	Collected: 6/8/2016 3:00:00 PM			Analysis Type: Initial/TOT				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACETONE	3.3	J	0.60	LOD	10	LOQ	ug/L	UJ	Fd, Tb	

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID: WDS-SB22-GW DUP **Collected:** 6/8/2016 3:00:00 PM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.60	U	0.60	LOD	10	LOQ	ug/L	UJ	Fd

Sample ID: WDS-SB25-GW **Collected:** 6/8/2016 11:00:00 AM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.4	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: WDS-SB26-GW **Collected:** 6/8/2016 10:05:00 AM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.0	J	0.60	LOD	10	LOQ	ug/L	UJ	Fd, Tb

Sample ID: WDS-SB26-GW DUP **Collected:** 6/8/2016 10:05:00 AM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.3	J	0.60	LOD	10	LOQ	ug/L	UJ	Fd, Tb

Sample ID: WDS-SB27-GW **Collected:** 6/8/2016 10:00:00 AM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	5.6	J	5.0	LOD	10	LOQ	ug/L	J	RI
ACETONE	4.6	J	0.60	LOD	10	LOQ	ug/L	U	Tb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606337

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40174	7/25/2016 11:49:09 AM	ALUMINUM NICKEL	9.8 ug/L 0.23 ug/L	H11-SB01-GW WDS-SB22-GW WDS-SB22-GW DUP WDS-SB25-GW WDS-SB26-GW WDS-SB26-GW DUP WDS-SB27-GW

Method: 6020A-SA
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40163	6/16/2016 11:05:33 AM	ANTIMONY	0.87 ug/L	H11-SB01-GW WDS-SB22-GW WDS-SB22-GW DUP WDS-SB25-GW WDS-SB26-GW WDS-SB26-GW DUP WDS-SB27-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H11-SB01-GW(Initial/TOT)	ANTIMONY	0.58 ug/L	2.5U ug/L
WDS-SB22-GW DUP(Initial/TOT)	ANTIMONY	0.64 ug/L	2.5U ug/L
WDS-SB22-GW(Initial/TOT)	ANTIMONY	1.3 ug/L	2.5U ug/L
WDS-SB25-GW(Initial/TOT)	ANTIMONY	1.1 ug/L	2.5U ug/L
WDS-SB26-GW DUP(Initial/TOT)	ANTIMONY	0.34 ug/L	2.5U ug/L
WDS-SB26-GW(Initial/TOT)	ANTIMONY	0.44 ug/L	2.5U ug/L
WDS-SB27-GW(Initial/TOT)	ANTIMONY	0.84 ug/L	2.5U ug/L

Surrogate Outlier Report

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB22-GW DUP (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	43.7 40.7	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J- (all detects) UJ (all non-detects)
WDS-SB22-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	27.8 24.8	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB26-GW DUP (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	37.5 37.3	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB26-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	22.3 21.2	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB22-GW DUP (Initial/TOT)	PHENOL-D5	24.5	30.00-130.00	No Affected Compounds	
WDS-SB22-GW (Initial/TOT)	PHENOL-D5	25.2	30.00-130.00	No Affected Compounds	
WDS-SB26-GW DUP (Initial/TOT)	PHENOL-D5	26.7	30.00-130.00	No Affected Compounds	
WDS-SB26-GW (Initial/TOT)	PHENOL-D5	26.8	30.00-130.00	No Affected Compounds	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40156 (WDS-SB22-GW WDS-SB22-GW DUP WDS-SB25-GW WDS-SB26-GW WDS-SB26-GW DUP)	4-NITROPHENOL N-NITROSODIMETHYLAMINE	47.8 39.9	- -	50.00-130.00 50.00-130.00	- -	4-NITROPHENOL N-NITROSODIMETHYLAMINE	J- (all detects) UJ (all non-detects)
LCS-40170 (WDS-SB27-GW)	N-NITROSODIMETHYLAMINE	39.6	-	50.00-130.00	-	N-NITROSODIMETHYLAMINE	J-(all detects) UJ(all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB26-GW (Total)	WDS-SB26-GW DUP (Total)			
ARSENIC	1.7	2.5	38	30.00	J (all detects) UJ (all non-detects)

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB22-GW (Total)	WDS-SB22-GW DUP (Total)			
ALUMINUM	280000	15000	180	30.00	J(all detects) UJ(all non-detects)
ARSENIC	16	0.76	182	30.00	
BARIUM	1600	49	188	30.00	
BERYLLIUM	16	20 U	200	30.00	
CADMIUM	4.8	1.0 U	200	30.00	
CALCIUM	52000	12000	125	30.00	
CHROMIUM	340	11	187	30.00	
COBALT	140	3.6	190	30.00	
COPPER	220	4.8	191	30.00	
IRON	92000	4600	181	30.00	
LEAD	120	4.4	186	30.00	
MAGNESIUM	15000	4400	109	30.00	
MANGANESE	6800	180	190	30.00	
NICKEL	100	5.0	181	30.00	
POTASSIUM	13000	2500	135	30.00	
SELENIUM	7.0	5.0 U	200	30.00	
THALLIUM	0.90	2.0 U	200	30.00	
VANADIUM	280	11	185	30.00	
ZINC	270	11	184	30.00	

Method: 6020A-SA
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB22-GW (Total)	WDS-SB22-GW DUP (Total)			
ANTIMONY	1.3	0.64	68	30.00	J(all detects)
SILVER	0.62	1.5 U	200	30.00	UJ(all non-detects)

Method: 8260C
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB26-GW	WDS-SB26-GW DUP			
ACETONE	3.0	4.3	36	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB22-GW	WDS-SB22-GW DUP			
ACETONE	3.3	10 U	200	30.00	J(all detects) UJ(all non-detects)

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Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB26-GW	WDS-SB26-GW DUP			
BENZO(B)FLUORANTHENE	0.019 U	0.025	200	30.00	J(all detects) UJ(all non-detects)
CHRYSENE	0.019 U	0.020	200	30.00	
FLUORANTHENE	0.019 U	0.043	200	30.00	
NAPHTHALENE	0.019 U	0.021	200	30.00	
PHENANTHRENE	0.019 U	0.021	200	30.00	
PYRENE	0.019 U	0.032	200	30.00	

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-060816-01(Initial/TOT)	6/8/2016 9:00:00 AM	ACETONE	2.5 ug/L	H11-SB01-GW WDS-SB22-GW WDS-SB22-GW DUP WDS-SB25-GW WDS-SB26-GW WDS-SB26-GW DUP WDS-SB27-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
WDS-SB22-GW(Initial/TOT)	ACETONE	3.3 ug/L	10U ug/L
WDS-SB25-GW(Initial/TOT)	ACETONE	3.4 ug/L	10U ug/L
WDS-SB26-GW DUP(Initial/TOT)	ACETONE	4.3 ug/L	10U ug/L
WDS-SB26-GW(Initial/TOT)	ACETONE	3.0 ug/L	10U ug/L
WDS-SB27-GW(Initial/TOT)	ACETONE	4.6 ug/L	10U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H11-SB01-GW	CADMIUM	J	0.45	1.0	LOQ	ug/L	J (all detects)
	CALCIUM	J	13000	20000	LOQ	ug/L	
	CHROMIUM	JG	180	200	LOQ	ug/L	
	COBALT	J	20	100	LOQ	ug/L	
	MAGNESIUM	J	9800	10000	LOQ	ug/L	
	NICKEL	J	56	200	LOQ	ug/L	
	POTASSIUM	J	7400	10000	LOQ	ug/L	
	SELENIUM	J	1.9	5.0	LOQ	ug/L	
	THALLIUM	J	0.91	2.0	LOQ	ug/L	
WDS-SB22-GW	BERYLLIUM	J	16	20	LOQ	ug/L	J (all detects)
	NICKEL	J	100	200	LOQ	ug/L	
	THALLIUM	J	0.90	2.0	LOQ	ug/L	
WDS-SB22-GW DUP	ARSENIC	JG	0.76	1.5	LOQ	ug/L	J (all detects)
	COBALT	J	3.6	5.0	LOQ	ug/L	
	COPPER	J	4.8	5.0	LOQ	ug/L	
	NICKEL	J	5.0	10	LOQ	ug/L	
	ZINC	J	11	50	LOQ	ug/L	
WDS-SB25-GW	CADMIUM	J	0.46	1.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.20	2.0	LOQ	ug/L	
WDS-SB26-GW	NICKEL	J	7.4	10	LOQ	ug/L	J (all detects)
	ZINC	J	22	50	LOQ	ug/L	
WDS-SB26-GW DUP	NICKEL	J	8.3	10	LOQ	ug/L	J (all detects)
	ZINC	J	23	50	LOQ	ug/L	
WDS-SB27-GW	CADMIUM	J	0.43	1.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.86	2.0	LOQ	ug/L	

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H11-SB01-GW	ANTIMONY	JG	0.58	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.57	1.5	LOQ	ug/L	
WDS-SB22-GW	ANTIMONY	JG	1.3	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.62	1.5	LOQ	ug/L	
WDS-SB22-GW DUP	ANTIMONY	JG	0.64	2.5	LOQ	ug/L	J (all detects)
WDS-SB25-GW	ANTIMONY	JG	1.1	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.28	1.5	LOQ	ug/L	
WDS-SB26-GW	ANTIMONY	JG	0.44	2.5	LOQ	ug/L	J (all detects)
WDS-SB26-GW DUP	ANTIMONY	JG	0.34	2.5	LOQ	ug/L	J (all detects)
WDS-SB27-GW	ANTIMONY	JG	0.84	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.24	1.5	LOQ	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606337

Laboratory: RTILABS

EDD Filename: EDD_1606337_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-GW-060816-01	ACETONE	J	2.5	10	LOQ	ug/L	J (all detects)
WDS-SB22-GW	ACETONE	J	3.3	10	LOQ	ug/L	J (all detects)
WDS-SB25-GW	ACETONE	J	3.4	10	LOQ	ug/L	J (all detects)
WDS-SB26-GW	ACETONE	J	3.0	10	LOQ	ug/L	J (all detects)
WDS-SB26-GW DUP	ACETONE	J	4.3	10	LOQ	ug/L	J (all detects)
WDS-SB27-GW	2-Butanone [MEK] ACETONE	J J	5.6 4.6	10 10	LOQ LOQ	ug/L ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606387		
Date(s) of Collection:	June 9 th , 2016		
Number/Type Samples & Analyses:	7 groundwater samples, 1 water sample, and 1 trip blank for a project-specific list of VOCs, SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 31, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606387. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENT

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

Sample WDS-SB24-GW was analyzed twice for SVOCs. The initial run had 2 surrogates that didn't meet the control limits. The lab re-ran the sample but it was extracted outside of the recommended hold time. The initial results were used.

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:	Water						

Sample ID: H12-SB01-GW		Collected: 6/9/2016 10:15:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	1100	GX	2.5	LOD	50	LOQ	ug/L	J+	Ms
CALCIUM	48000	X	120	LOD	1000	LOQ	ug/L	J+	Ms
COBALT	1.8	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
COPPER	1.5	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
IRON	37000	X	120	LOD	200	LOQ	ug/L	J+	Ms
MANGANESE	1400	X	0.50	LOD	5.0	LOQ	ug/L	J+	Ms
NICKEL	3.0	J	0.50	LOD	10	LOQ	ug/L	J	RI
POTASSIUM	8200	X	120	LOD	500	LOQ	ug/L	J+	Ms
SODIUM	11000	X	120	LOD	500	LOQ	ug/L	J+	Ms
VANADIUM	3.6	J	0.50	LOD	4.0	LOQ	ug/L	J	RI
ZINC	8.8	J	2.5	LOD	50	LOQ	ug/L	J	RI
CHROMIUM	2.0	JG	0.50	LOD	10	LOQ	ug/L	J	RI

Sample ID: WDS-SB23-GW		Collected: 6/9/2016 2:00:00 PM			Analysis Type: Dilution-1/TOT			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	51000		2500	LOD	20000	LOQ	ug/L	J	Fd
CHROMIUM	480	G	10	LOD	200	LOQ	ug/L	J	Fd
COBALT	77	J	10	LOD	100	LOQ	ug/L	J	RI, Fd
COPPER	510		10	LOD	100	LOQ	ug/L	J	Fd
IRON	320000		2500	LOD	4000	LOQ	ug/L	J	Fd
MAGNESIUM	43000		2500	LOD	10000	LOQ	ug/L	J	Fd
MANGANESE	2500		10	LOD	100	LOQ	ug/L	J	Fd
NICKEL	190	J	10	LOD	200	LOQ	ug/L	J	RI, Fd
POTASSIUM	27000		2500	LOD	10000	LOQ	ug/L	J	Fd
VANADIUM	470		10	LOD	80	LOQ	ug/L	J	Fd

Sample ID: WDS-SB23-GW		Collected: 6/9/2016 2:00:00 PM			Analysis Type: Dilution-2/TOT			Dilution: 2000	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	210000		1000	LOD	20000	LOQ	ug/L	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A	Matrix: Water

Sample ID:WDS-SB23-GW Collected: 6/9/2016 2:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	95	G	1.0	LOD	1.5	LOQ	ug/L	J	Fd
BARIUM	1200		0.50	LOD	25	LOQ	ug/L	J	Fd
CADMIUM	3.5		0.50	LOD	1.0	LOQ	ug/L	J	Fd
LEAD	69		0.50	LOD	1.0	LOQ	ug/L	J	Fd
THALLIUM	1.8	J	0.50	LOD	2.0	LOQ	ug/L	J	RI, Fd
ZINC	460		2.5	LOD	50	LOQ	ug/L	J	Fd

Sample ID:WDS-SB23-GW Collected: 6/9/2016 2:00:00 PM Analysis Type: Reanalysis-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	8.2	J	10	LOD	20	LOQ	ug/L	J	RI, Fd

Sample ID:WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Dilution-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	27000		2500	LOD	20000	LOQ	ug/L	J	Fd
CHROMIUM	190	JG	10	LOD	200	LOQ	ug/L	J	RI, Fd
COBALT	40	J	10	LOD	100	LOQ	ug/L	J	RI, Fd
COPPER	230		10	LOD	100	LOQ	ug/L	J	Fd
IRON	140000		2500	LOD	4000	LOQ	ug/L	J	Fd
MAGNESIUM	25000		2500	LOD	10000	LOQ	ug/L	J	Fd
MANGANESE	1100		10	LOD	100	LOQ	ug/L	J	Fd
NICKEL	100	J	10	LOD	200	LOQ	ug/L	J	RI, Fd
POTASSIUM	13000		2500	LOD	10000	LOQ	ug/L	J	Fd
VANADIUM	190		10	LOD	80	LOQ	ug/L	J	Fd

Sample ID:WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Dilution-2/TOT Dilution: 2000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	100000		1000	LOD	20000	LOQ	ug/L	J	Fd

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A	Matrix: Water

Sample ID:WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	140	G	1.0	LOD	1.5	LOQ	ug/L	J	Fd
BARIUM	630		0.50	LOD	25	LOQ	ug/L	J	Fd
CADMIUM	1.6		0.50	LOD	1.0	LOQ	ug/L	J	Fd
LEAD	44		0.50	LOD	1.0	LOQ	ug/L	J	Fd
THALLIUM	1.0	J	0.50	LOD	2.0	LOQ	ug/L	J	RI, Fd
ZINC	220		2.5	LOD	50	LOQ	ug/L	J	Fd

Sample ID:WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Reanalysis-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	10	U	10	LOD	20	LOQ	ug/L	UJ	Fd

Sample ID:WDS-SB24-GW Collected: 6/9/2016 3:15:00 PM Analysis Type: Dilution-1/TOT Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	17	J	10	LOD	40	LOQ	ug/L	J	RI

Method Category:	METALS	
Method:	6020A-SA	Matrix: Water

Sample ID:H12-SB01-GW Collected: 6/9/2016 10:15:00 AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.0	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb
SILVER	0.30	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID:WDS-SB23-GW Collected: 6/9/2016 2:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.92	JG	0.75	LOD	2.5	LOQ	ug/L	UJ	Mb, Fd
SILVER	1.1	J	0.50	LOD	1.5	LOQ	ug/L	J	RI, Fd

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-SA	Matrix:	Water						

Sample ID: WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.50	JG	0.75	LOD	2.5	LOQ	ug/L	UJ	Mb, Fd
SILVER	0.76	J	0.50	LOD	1.5	LOQ	ug/L	J	RI, Fd

Sample ID: WDS-SB24-GW Collected: 6/9/2016 3:15:00 PM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.1	G	0.75	LOD	2.5	LOQ	ug/L	U	Mb

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Water						

Sample ID: H12-SB01-GW Collected: 6/9/2016 10:15:00 AM Analysis Type: DILUTION-1/TOT-BASE/NEUTRAL Dilution: 40

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	12		0.75	LOD	0.75	LOQ	ug/L	J-	Ms
2-METHYLNAPHTHALENE	12		0.75	LOD	0.75	LOQ	ug/L	J	Ms, Ms
ACENAPHTHENE	11		0.75	LOD	0.75	LOQ	ug/L	J-	Ms
FLUORENE	5.5		0.75	LOD	0.75	LOQ	ug/L	J-	Ms
NAPHTHALENE	97	J	0.75	LOD	0.75	LOQ	ug/L	J-	Ms
PHENANTHRENE	13		0.75	LOD	0.75	LOQ	ug/L	J-	Ms

Sample ID: H12-SB01-GW Collected: 6/9/2016 10:15:00 AM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.28		0.019	LOD	0.019	LOQ	ug/L	J-	Ms
BENZO(A)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Ms
BENZO(B)FLUORANTHENE	0.027		0.019	LOD	0.019	LOQ	ug/L	J	Ms
BENZO(G,H,I)PERYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Ms
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Ms
DIBENZO(A,H)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Ms
FLUORANTHENE	0.73		0.019	LOD	0.019	LOQ	ug/L	J-	Ms
INDENO(1,2,3-CD)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Ms

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Water

Sample ID: H12-SB01-GW	Collected: 6/9/2016 10:15:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	0.34		0.019	LOD	0.019	LOQ	ug/L	J	Ms, Ms

Sample ID: WDS-SB23-GW	Collected: 6/9/2016 2:00:00 PM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.041		0.019	LOD	0.019	LOQ	ug/L	J	Fd
NAPHTHALENE	0.11		0.019	LOD	0.019	LOQ	ug/L	J	Fd

Sample ID: WDS-SB23-GW DUP	Collected: 6/9/2016 2:00:00 PM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.030		0.019	LOD	0.019	LOQ	ug/L	J	Fd
NAPHTHALENE	0.078		0.019	LOD	0.019	LOQ	ug/L	J	Fd

Sample ID: WDS-SB24-GW	Collected: 6/9/2016 3:15:00 PM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
2-METHYLNAPHTHALENE	0.026		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ACENAPHTHENE	0.056		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ACENAPHTHYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(G,H,I)PERYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
CHRYSENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
DIBENZO(A,H)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
FLUORENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Water						

Sample ID: WDS-SB24-GW	Collected: 6/9/2016 3:15:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
NAPHTHALENE	0.069		0.019	LOD	0.019	LOQ	ug/L	J-	Surr	
PHENANTHRENE	0.025		0.019	LOD	0.019	LOQ	ug/L	J-	Surr	
PYRENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr	

Method Category:	SVOA								
Method:	8270D-MOD	Matrix:	Water						

Sample ID: H12-SB01-GW	Collected: 6/9/2016 10:15:00 AM		Analysis Type: Initial/TOT-ACID				Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
4-NITROPHENOL	2.3	UQ	2.3	LOD	23	LOQ	ug/L	UJ	Lcs	
PHENOL	0.93	UX	0.93	LOD	4.7	LOQ	ug/L	UJ	Ms	

Sample ID: H12-SB01-GW	Collected: 6/9/2016 10:15:00 AM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
3,3'-DICHLOROBENZIDINE	2.3	UX	2.3	LOD	19	LOQ	ug/L	UJ	Ms	
CARBAZOLE	3.3	J	0.93	LOD	4.7	LOQ	ug/L	J	RI	
N-NITROSODIMETHYLAMINE	0.93	UQX	0.93	LOD	4.7	LOQ	ug/L	UJ	Ms, Lcs	

Sample ID: WDS-SB23-GW	Collected: 6/9/2016 2:00:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs	

Sample ID: WDS-SB23-GW	Collected: 6/9/2016 2:00:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
N-NITROSODIMETHYLAMINE	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs	

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Water						

Sample ID:WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Initial/TOT-ACID Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs

Sample ID:WDS-SB23-GW DUP Collected: 6/9/2016 2:00:00 PM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID:WDS-SB24-GW Collected: 6/9/2016 3:15:00 PM Analysis Type: Initial/TOT-ACID Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.3	UQ	2.3	LOD	23	LOQ	ug/L	UJ	Lcs

Sample ID:WDS-SB24-GW Collected: 6/9/2016 3:15:00 PM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	2.3	U	2.3	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.93	U	0.93	LOD	9.3	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	2.3	U	2.3	LOD	9.3	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	2.3	U	2.3	LOD	23	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	2.3	UZ	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Water

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL) PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.93	U	0.93	LOD	3.7	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	2.3	U	2.3	LOD	2.8	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.93	UQ	0.93	LOD	4.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr

Method Category:	VOA	
Method:	8260C	Matrix: Water

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UX	2.0	LOD	5.0	LOQ	ug/L	UJ	Ms
2-Butanone [MEK]	3.1	J	5.0	LOD	10	LOQ	ug/L	J	RI
ACETONE	15	X	0.60	LOD	10	LOQ	ug/L	UJ	Ms, Mb, Tb

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.3	J	0.60	LOD	10	LOQ	ug/L	U	Mb

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA									
Method:	8260C	Matrix:		Water						

Sample ID: WDS-SB23-GW **Collected:** 6/9/2016 2:00:00 PM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.6	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb

Sample ID: WDS-SB23-GW DUP **Collected:** 6/9/2016 2:00:00 PM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.2	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb

Sample ID: WDS-SB24-GW **Collected:** 6/9/2016 3:15:00 PM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	3.3	J	5.0	LOD	10	LOQ	ug/L	J	RI
ACETONE	7.8	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
METHYLENE CHLORIDE	2.2	J	0.60	LOD	5.0	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
StoE	Sampling to Extraction Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Tb	Trip Blank Contamination

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606387

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606387
EDD Filename: EDD_1606387_SEDD_2a_v6_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD Preparation Method: 3510C
Matrix: Water

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB24-GW (Reanalysis-1/TOT)	Sampling To Extraction	18.00	7.00	DAYS	J- (all detects) R (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40174	7/25/2016 11:49:09 AM	ALUMINUM NICKEL	9.8 ug/L 0.23 ug/L	H12-SB01-GW WDS-SB23-GW WDS-SB23-GW DUP WDS-SB24-GW

Method: 6020A-SA
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40163	6/16/2016 11:05:33 AM	ANTIMONY	0.87 ug/L	H12-SB01-GW WDS-SB23-GW WDS-SB23-GW DUP WDS-SB24-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H12-SB01-GW(Initial/TOT)	ANTIMONY	1.0 ug/L	2.5U ug/L
WDS-SB23-GW DUP(Initial/TOT)	ANTIMONY	0.50 ug/L	2.5U ug/L
WDS-SB23-GW(Initial/TOT)	ANTIMONY	0.92 ug/L	2.5U ug/L
WDS-SB24-GW(Initial/TOT)	ANTIMONY	4.1 ug/L	4.1U ug/L

Method: 8260C
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA10 MBLK 06201	6/20/2016 8:33:00 AM	ACETONE	2.7 ug/L	H12-SB01-GW TB-GW-060916-01 WDS-SB23-GW WDS-SB23-GW DUP WDS-SB24-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H12-SB01-GW(Initial/TOT)	ACETONE	15 ug/L	15U ug/L
TB-GW-060916-01(Initial/TOT)	ACETONE	4.3 ug/L	10U ug/L
WDS-SB23-GW DUP(Initial/TOT)	ACETONE	4.2 ug/L	10U ug/L
WDS-SB23-GW(Initial/TOT)	ACETONE	4.6 ug/L	10U ug/L
WDS-SB24-GW(Initial/TOT)	ACETONE	7.8 ug/L	10U ug/L

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB24-GW (Initial/TOT)	2-FLUOROBIPHENYL	41.8	44.00-119.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
	Terphenyl-d14	35.3	50.00-134.00		

Method: 8270D-MOD
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB23-GW DUP (Initial/TOT)	PHENOL-D5	28.7	30.00-130.00	No Affected Compounds	
WDS-SB23-GW (Initial/TOT)	PHENOL-D5	29.4	30.00-130.00	No Affected Compounds	
WDS-SB24-GW (Reanalysis-1/TOT)	PHENOL-D5	24	30.00-130.00	No Affected Compounds	
WDS-SB24-GW (Initial/TOT)	2-FLUOROBIPHENYL	37.3	44.00-119.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
	Nitrobenzene-d5	37.3	44.00-120.00		
	PHENOL-D5	23.7	30.00-130.00		
	Terphenyl-d14	40.1	50.00-134.00		

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H12-SB01-GWMS H12-SB01-GWMSD (H12-SB01-GW)	3,3'-DICHLOROBENZIDINE N-NITROSODIMETHYLAMINE PHENOL	8.5 31.5 33.4	10.1 33.2 29.8	27.00-129.00 50.00-130.00 34.00-121.00	- - -	3,3'-DICHLOROBENZIDINE N-NITROSODIMETHYLAMINE PHENOL	J- (all detects) UJ (all non-detects)
H12-SB01-GWMS H12-SB01-GWMSD (H12-SB01-GW)	PENTACHLOROPHENOL	157	140	35.00-138.00	-	PENTACHLOROPHENOL	J+(all detects)

Method: 8270D SIM
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H12-SB01-GWMS H12-SB01-GWMSD (H12-SB01-GW)	BENZO(B)FLUORANTHENE PYRENE	- 138	- 184	53.00-126.00 53.00-121.00	43.1 (20.00) 26.81 (20.00)	BENZO(B)FLUORANTHENE PYRENE	J(all detects)
H12-SB01-GWMS H12-SB01-GWMSD (H12-SB01-GW)	2-METHYLNAPHTHALENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE	-2070 - 38.7 - - 47.1	-1870 47.2 22.3 52.2 29.7 26.6	39.00-114.00 53.00-120.00 44.00-128.00 54.00-125.00 44.00-131.00 48.00-130.00	23.5 (20.00) 37.92 (20.00) 55.46 (20.00) 21.14 (20.00) 58.5 (20.00) 57.34 (20.00)	2-METHYLNAPHTHALENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE	J(all detects) UJ(all non-detects)
H12-SB01-GWMS H12-SB01-GWMSD (H12-SB01-GW)	1-METHYLNAPHTHALENE ACENAPHTHENE ANTHRACENE FLUORANTHENE FLUORENE NAPHTHALENE PHENANTHRENE	-2050 -1850 -2570 -167 -848 -20500 -2150	-1950 -1740 -2630 -133 -775 -20700 -2310	41.00-115.00 48.00-114.00 53.00-119.00 58.00-120.00 50.00-118.00 43.00-114.00 53.00-115.00	- - - - - - -	1-METHYLNAPHTHALENE ACENAPHTHENE ANTHRACENE FLUORANTHENE FLUORENE NAPHTHALENE PHENANTHRENE	J-(all detects) UJ(all non-detects)

Method: 6020A
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H12-SB01-GWMS (Total) H12-SB01-GWMSD (Total) (H12-SB01-GW)	ALUMINUM CALCIUM IRON MANGANESE POTASSIUM SODIUM	254 179 174 144 117 129	251 169 150 142 118 122	84.00-117.00 87.00-118.00 87.00-115.00 87.00-115.00 87.00-115.00 85.00-117.00	- - - - - -	ALUMINUM CALCIUM IRON MANGANESE POTASSIUM SODIUM	J+(all detects)

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H12-SB01-GWMS H12-SB01-GWMSD (H12-SB01-GW)	1,2-DIBROMO-3-CHLOROPROPAN ACETONE	58.8 -10.6	- -13.9	62.00-128.00 39.00-160.00	- -	1,2-DIBROMO-3-CHLOROPROPA ACETONE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40156 (H12-SB01-GW WDS-SB23-GW WDS-SB23-GW DUP WDS-SB24-GW)	4-NITROPHENOL N-NITROSODIMETHYLAMINE	47.8 39.9	- -	50.00-130.00 50.00-130.00	- -	4-NITROPHENOL N-NITROSODIMETHYLAMINE	J- (all detects) UJ (all non-detects)
LCS-40262 (WDS-SB24-GW)	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	48.8 39.6 31.2	- - -	50.00-130.00 50.00-130.00 34.00-121.00	- - -	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

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Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB23-GW (Total)	WDS-SB23-GW DUP (Total)			
ALUMINUM	210000	100000	71	30.00	J (all detects) UJ (all non-detects)
ARSENIC	95	140	38	30.00	
BARIUM	1200	630	62	30.00	
BERYLLIUM	8.2	20 U	200	30.00	
CADMIUM	3.5	1.6	75	30.00	
CALCIUM	51000	27000	62	30.00	
CHROMIUM	480	190	87	30.00	
COBALT	77	40	63	30.00	
COPPER	510	230	76	30.00	
IRON	320000	140000	78	30.00	
LEAD	69	44	44	30.00	
MAGNESIUM	43000	25000	53	30.00	
MANGANESE	2500	1100	78	30.00	
NICKEL	190	100	62	30.00	
POTASSIUM	27000	13000	70	30.00	
THALLIUM	1.8	1.0	57	30.00	
VANADIUM	470	190	85	30.00	
ZINC	460	220	71	30.00	

Method: 6020A-SA
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB23-GW (Total)	WDS-SB23-GW DUP (Total)			
ANTIMONY	0.92	0.50	59	30.00	J(all detects)
SILVER	1.1	0.76	37	30.00	UJ(all non-detects)

Method: 8270D SIM
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	WDS-SB23-GW	WDS-SB23-GW DUP			
1-METHYLNAPHTHALENE	0.041	0.030	31	30.00	J(all detects)
NAPHTHALENE	0.11	0.078	34	30.00	UJ(all non-detects)

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Trip Blank Outlier Report

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-060916-01(Initial/TOT)	6/9/2016 9:00:00 AM	ACETONE	4.3 ug/L	H12-SB01-GW WDS-SB23-GW WDS-SB23-GW DUP WDS-SB24-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H12-SB01-GW(Initial/TOT)	ACETONE	15 ug/L	15U ug/L
WDS-SB23-GW DUP(Initial/TOT)	ACETONE	4.2 ug/L	10U ug/L
WDS-SB23-GW(Initial/TOT)	ACETONE	4.6 ug/L	10U ug/L
WDS-SB24-GW(Initial/TOT)	ACETONE	7.8 ug/L	10U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-GW	CHROMIUM	JG	2.0	10	LOQ	ug/L	J (all detects)
	COBALT	J	1.8	5.0	LOQ	ug/L	
	COPPER	J	1.5	5.0	LOQ	ug/L	
	NICKEL	J	3.0	10	LOQ	ug/L	
	VANADIUM	J	3.6	4.0	LOQ	ug/L	
	ZINC	J	8.8	50	LOQ	ug/L	
WDS-SB23-GW	BERYLLIUM	J	8.2	20	LOQ	ug/L	J (all detects)
	COBALT	J	77	100	LOQ	ug/L	
	NICKEL	J	190	200	LOQ	ug/L	
	THALLIUM	J	1.8	2.0	LOQ	ug/L	
WDS-SB23-GW DUP	CHROMIUM	JG	190	200	LOQ	ug/L	J (all detects)
	COBALT	J	40	100	LOQ	ug/L	
	NICKEL	J	100	200	LOQ	ug/L	
	THALLIUM	J	1.0	2.0	LOQ	ug/L	
WDS-SB24-GW	THALLIUM	J	17	40	LOQ	ug/L	J (all detects)

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-GW	ANTIMONY	JG	1.0	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.30	1.5	LOQ	ug/L	
WDS-SB23-GW	ANTIMONY	JG	0.92	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	1.1	1.5	LOQ	ug/L	
WDS-SB23-GW DUP	ANTIMONY	JG	0.50	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.76	1.5	LOQ	ug/L	

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-GW	2-Butanone [MEK]	J	3.1	10	LOQ	ug/L	J (all detects)
TB-GW-060916-01	ACETONE	J	4.3	10	LOQ	ug/L	J (all detects)
WDS-SB23-GW	ACETONE	J	4.6	10	LOQ	ug/L	J (all detects)
WDS-SB23-GW DUP	ACETONE	J	4.2	10	LOQ	ug/L	J (all detects)
WDS-SB24-GW	2-Butanone [MEK]	J	3.3	10	LOQ	ug/L	J (all detects)
	ACETONE	J	7.8	10	LOQ	ug/L	
	METHYLENE CHLORIDE	J	2.2	5.0	LOQ	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606387

Laboratory: RTILABS

EDD Filename: EDD_1606387_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-GW	CARBAZOLE	J	3.3	4.7	LOQ	ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606422		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	7 ground water and 1 trip blank samples for a project-specific list of VOCs, SVOCs, PCBs, and metals		
Data Reviewer:	Devon Chicoine AECOM/Arlington, VA		
Completed:	August 26, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for ground water data included in Sample Delivery Group (SDG) 1606422. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- NA Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

Sample WDS-SB21-GW was analyzed twice for SVOCs. The initial run had 3 surrogates that didn't meet the control limits. The lab re-ran the sample but it was extracted outside of hold time. The initial results were used.

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:		Water					

Sample ID: WDS-SB20-GW		Collected: 6/12/2016 2:50:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.53	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB21-GW		Collected: 6/12/2016 11:30:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	1700	GX	2.5	LOD	50	LOQ	ug/L	J-	Ms
BARIUM	19	J	0.50	LOD	25	LOQ	ug/L	J	RI
CHROMIUM	2.1	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	1.5	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
COPPER	0.82	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
IRON	1900	X	120	LOD	200	LOQ	ug/L	J-	Ms
LEAD	0.97	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
NICKEL	1.9	J	0.50	LOD	10	LOQ	ug/L	J	RI
POTASSIUM	2400	X	120	LOD	500	LOQ	ug/L	J-	Ms
SELENIUM	1.5	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
SODIUM	14000	X	120	LOD	500	LOQ	ug/L	J-	Ms
VANADIUM	2.7	J	0.50	LOD	4.0	LOQ	ug/L	J	RI

Method Category:	METALS								
Method:	6020A-SA	Matrix:		Water					

Sample ID: WDS-SB20-GW		Collected: 6/12/2016 2:50:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.65	JG	0.75	LOD	2.5	LOQ	ug/L	U	Mb
SILVER	0.78	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB21-GW		Collected: 6/12/2016 11:30:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.3	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.60	JG	0.50	LOD	1.5	LOQ	ug/L	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Water

Sample ID: STB-SB01-GW		Collected: 6/10/2016 2:50:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.27	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
2-METHYLNAPHTHALENE	0.50	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
FLUORENE	0.020	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
NAPHTHALENE	0.19	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
PHENANTHRENE	0.026	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs

Sample ID: STB-SB03-GW		Collected: 6/10/2016 4:20:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.14	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
2-METHYLNAPHTHALENE	0.23	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
ACENAPHTHENE	0.085		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
ACENAPHTHYLENE	0.054		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
ANTHRACENE	0.18	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
BENZ(A)ANTHRACENE	0.10	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
BENZO(A)PYRENE	0.028		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
BENZO(B)FLUORANTHENE	0.038		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
BENZO(K)FLUORANTHENE	0.024		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
CHRYSENE	0.032		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
FLUORANTHENE	0.13		0.021	LOD	0.021	LOQ	ug/L	J+	Surr
FLUORENE	0.13	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
NAPHTHALENE	0.14	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
PHENANTHRENE	0.19	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr
PYRENE	0.13	Q	0.021	LOD	0.021	LOQ	ug/L	J+	Lcs, Surr

Sample ID: WDS-SB20-GW		Collected: 6/12/2016 2:50:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.036	Q	0.023	LOD	0.023	LOQ	ug/L	J+	Lcs
2-METHYLNAPHTHALENE	0.062	Q	0.023	LOD	0.023	LOQ	ug/L	J+	Lcs
NAPHTHALENE	0.055	Q	0.023	LOD	0.023	LOQ	ug/L	J+	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Water

Sample ID: WDS-SB21-GW	Collected: 6/12/2016 11:30:00 AM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.056	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
2-METHYLNAPHTHALENE	0.087	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
FLUORENE	0.021	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
NAPHTHALENE	0.080	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
PHENANTHRENE	0.036	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Sample ID: STB-SB01-GW	Collected: 6/10/2016 2:50:00 PM	Analysis Type: Initial/TOT-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DICHLOROPHENOL	2.4	UX	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms
2-CHLOROPHENOL	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
2-NITROPHENOL	2.4	UYX	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms
4-NITROPHENOL	2.4	UX	2.4	LOD	24	LOQ	ug/L	UJ	Ms
PHENOL	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms

Sample ID: STB-SB01-GW	Collected: 6/10/2016 2:50:00 PM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROENZENE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
1,2-DICHLOROENZENE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
1,3-DICHLOROENZENE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
1,4-DICHLOROENZENE	2.4	UX	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms
2-CHLORONAPHTHALENE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
4-BROMOPHENYL PHENYL ETHER	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
4-CHLOROPHENYL PHENYL ETHER	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
bis(2-chloroethoxy) methane	2.4	UX	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms
BIS(2-CHLOROETHYL) ETHER	2.4	UX	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UXZ	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms
DIBENZOFURAN	0.95	UX	0.95	LOD	3.8	LOQ	ug/L	UJ	Ms

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXACHLORO BENZENE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
HEXACHLORO BUTADIENE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
HEXACHLORO ETHANE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
ISOPHORONE	0.95	UX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms
NITRO BENZENE	2.4	UX	2.4	LOD	2.9	LOQ	ug/L	UJ	Ms
N-NITROSODIMETHYLAMINE	0.95	UQX	0.95	LOD	4.8	LOQ	ug/L	UJ	Ms, Lcs
N-Nitrosodi-n-propylamine	2.4	UX	2.4	LOD	4.8	LOQ	ug/L	UJ	Ms

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLORO BENZENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
1,2-DICHLORO BENZENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
1,3-DICHLORO BENZENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
1,4-DICHLORO BENZENE	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
3,3'-DICHLORO BENZIDINE	2.4	U	2.4	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.96	U	0.96	LOD	9.6	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
4-NITROANILINE	2.4	U	2.4	LOD	9.6	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	2.4	U	2.4	LOD	24	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UZ	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.96	U	0.96	LOD	3.8	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Sample ID: STB-SB03-GW		Collected: 6/10/2016 4:20:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYL PHTHALATE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
NITROBENZENE	2.4	U	2.4	LOD	2.9	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.96	UQ	0.96	LOD	4.8	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr

Sample ID: WDS-SB20-GW		Collected: 6/12/2016 2:50:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	3.2	UQ	3.2	LOD	32	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	3.2	UYQZ	3.2	LOD	32	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	1.3	UQ	1.3	LOD	6.3	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB20-GW		Collected: 6/12/2016 2:50:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	3.2	UYZ	3.2	LOD	6.3	LOQ	ug/L	UJ	Lcs
N-NITROSODIMETHYLAMINE	1.3	UYQ	1.3	LOD	6.3	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB21-GW		Collected: 6/12/2016 11:30:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: WDS-SB21-GW Collected: 6/12/2016 11:30:00 AM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,4-DICHLOROBENZENE	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	2.3	U	2.3	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.93	U	0.93	LOD	9.3	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.93	UX	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	2.3	U	2.3	LOD	9.3	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	2.3	U	2.3	LOD	23	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	2.3	UZ	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.93	U	0.93	LOD	3.7	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.93	UX	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	2.3	U	2.3	LOD	2.8	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.93	UQX	0.93	LOD	4.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: WDS-SB21-GW	Collected: 6/12/2016 11:30:00 AM	Analysis Type: Reanalysis-1/TOT/TOT-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENOL	0.94	UQH	0.94	LOD	4.7	LOQ	ug/L	R	Ms, Lcs, StoE

Method Category: VOA
Method: 8260C
Matrix: Water

Sample ID: STB-SB01-GW	Collected: 6/10/2016 2:50:00 PM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYX	2.0	LOD	5.0	LOQ	ug/L	UJ	Ms
ACETONE	13		0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: STB-SB03-GW	Collected: 6/10/2016 4:20:00 PM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	5.3	J	5.0	LOD	10	LOQ	ug/L	J	RI
ACETONE	8.0	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: TB-GW-061016-01	Collected: 6/10/2016 10:00:00 AM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.1	J	0.60	LOD	10	LOQ	ug/L	J	RI

Sample ID: TB-GW-061216-01	Collected: 6/12/2016 8:10:00 AM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	2.3	J	0.60	LOD	10	LOQ	ug/L	J	RI

Sample ID: WDS-SB20-GW	Collected: 6/12/2016 2:50:00 PM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.3	J	0.60	LOD	10	LOQ	ug/L	U	Tb

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID: WDS-SB21-GW Collected: 6/12/2016 11:30:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYX	2.0	LOD	5.0	LOQ	ug/L	UJ	Ms
ACETONE	2.5	J	0.60	LOD	10	LOQ	ug/L	UJ	Ms, Tb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
StoE	Sampling to Extraction Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606422

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606422
EDD Filename: EDD_1606422_SEDD_2a_v11_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD Preparation Method: 3510C
Matrix: Water

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB21-GW (Reanalysis-1/TOT/	Sampling To Extraction	15.00	7.00	DAYS	J- (all detects)
WDS-SB21-GWMS (Reanalysis-1/T		15.00	7.00	DAYS	R (all non-detects)
WDS-SB21-GWMSD (Reanalysis-1/		15.00	7.00	DAYS	

Method Blank Outlier Report

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40174	7/25/2016 11:49:09 AM	ALUMINUM NICKEL	9.8 ug/L 0.23 ug/L	WDS-SB20-GW

Method: 6020A-SA
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40163	6/16/2016 11:05:33 AM	ANTIMONY	0.87 ug/L	WDS-SB20-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
WDS-SB20-GW (Initial/TOT)	ANTIMONY	0.65 ug/L	2.5U ug/L

Surrogate Outlier Report

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
STB-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL	143	44.00-119.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
STB-SB01-GW (Initial/TOT)	PHENOL-D5	25	30.00-130.00	No Affected Compounds	
STB-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5	38.2 32.9 14.4	44.00-119.00 44.00-120.00 30.00-130.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB21-GW (Reanalysis-1/TOT/ TOT)	PHENOL-D5	27.1	30.00-130.00	No Affected Compounds	
WDS-SB21-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5	39.8 36 14.8	44.00-119.00 44.00-120.00 30.00-130.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD							
Matrix: Water							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
STB-SB01-GWMSD (STB-SB01-GW)	2,4,6-TRICHLOROPHENOL 2,4-Dimethyl phenol 2-Methylphenol (o-Cresol) 3/4-Methylphenol [m/p-Cresol] 4-CHLORO-3-METHYLPHENOL 4-Chloroaniline [p-Chloroaniline] BENZYL ALCOHOL	- - - - - - -	- - - - - - -	50.00-125.00 31.00-124.00 30.00-117.00 29.00-110.00 52.00-119.00 33.00-117.00 31.00-112.00	42.18 (25.00) 45.76 (25.00) 42.49 (25.00) 42.19 (25.00) 32.45 (25.00) 27.61 (25.00) 33.58 (25.00)	2,4,6-TRICHLOROPHENOL 2,4-Dimethyl phenol 2-Methylphenol (o-Cresol) 3/4-Methylphenol [m/p-Cresol] 4-CHLORO-3-METHYLPHENOL 4-Chloroaniline [p-Chloroaniline] BENZYL ALCOHOL	J (all detects)
STB-SB01-GWMS STB-SB01-GWMSD (STB-SB01-GW)	1,2,4-TRICHLOROENZENE 1,2-DICHLOROENZENE 1,3-DICHLOROENZENE 1,4-DICHLOROENZENE 2,4-DICHLOROPHENOL 2-CHLORONAPHTHALENE 2-CHLOROPHENOL 2-NITROPHENOL 4-CHLOROPHENYL PHENYL ETHER bis(2-chloroethoxy) methane BIS(2-CHLOROETHYL) ETHER BIS(2-CHLOROISOPROPYL)ETHER DIBENZOFURAN HEXACHLOROBTADIENE HEXACHLOROETHANE ISOPHORONE NITROBENZENE N-NITROSODIMETHYLAMINE N-Nitrosodi-n-propylamine PHENOL	23.2 22.5 20.6 20.9 45.6 30.8 34 45.3 48.2 37 31 30.2 42.3 19.1 16.7 37.5 35 20.8 37.2 12.5	- 31.2 - 28.4 - - - - - - - 43.2 - - - - - 27.7 - 24	29.00-116.00 32.00-111.00 28.00-110.00 29.00-112.00 47.00-121.00 40.00-116.00 38.00-117.00 47.00-123.00 53.00-121.00 48.00-120.00 43.00-118.00 50.00-130.00 53.00-118.00 22.00-124.00 21.00-115.00 42.00-124.00 45.00-121.00 50.00-130.00 49.00-119.00 34.00-121.00	35.38 (25.00) 32.25 (25.00) 30.97 (25.00) 30.49 (25.00) 44.79 (25.00) 40.47 (25.00) 37.71 (25.00) 37.08 (25.00) 31.2 (25.00) 39.78 (25.00) 33.94 (25.00) 35.53 (25.00) 32.67 (25.00) 33.01 (25.00) 31.1 (25.00) 46.15 (25.00) 34.81 (25.00) 28.45 (25.00) 39.09 (25.00) 62.83 (25.00)	1,2,4-TRICHLOROENZENE 1,2-DICHLOROENZENE 1,3-DICHLOROENZENE 1,4-DICHLOROENZENE 2,4-DICHLOROPHENOL 2-CHLORONAPHTHALENE 2-CHLOROPHENOL 2-NITROPHENOL 4-CHLOROPHENYL PHENYL ETHER bis(2-chloroethoxy) methane BIS(2-CHLOROETHYL) ETHER BIS(2-CHLOROISOPROPYL)ETHER DIBENZOFURAN HEXACHLOROBTADIENE HEXACHLOROETHANE ISOPHORONE NITROBENZENE N-NITROSODIMETHYLAMINE N-Nitrosodi-n-propylamine PHENOL	J(all detects) UJ(all non-detects)
STB-SB01-GWMS STB-SB01-GWMSD (STB-SB01-GW)	4-BROMOPHENYL PHENYL ETHER 4-NITROPHENOL HEXACHLOROENZENE	51.2 45 52.2	- 45.8 -	55.00-124.00 50.00-130.00 53.00-125.00	- - -	4-BROMOPHENYL PHENYL ETHER 4-NITROPHENOL HEXACHLOROENZENE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB21-GWMSD (WDS-SB21-GW)	BENZO(K)FLUORANTHENE	-	-	54.00-125.00	33.33 (20.00)	BENZO(K)FLUORANTHENE	J(all detects)
WDS-SB21-GWMS (WDS-SB21-GW)	BENZ(A)ANTHRACENE	123	-	59.00-120.00	-	BENZ(A)ANTHRACENE	J+(all detects)

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB21-GWMSD (WDS-SB21-GW)	Butyl benzyl phthalate PENTACHLOROPHENOL	- -	- -	53.00-134.00 35.00-138.00	25.31 (25.00) 26.68 (25.00)	Butyl benzyl phthalate PENTACHLOROPHENOL	J(all detects)
WDS-SB21-GWMSD (WDS-SB21-GW)	BENZOIC ACID	-	41.1	50.00-130.00	59.08 (25.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)
WDS-SB21-GWMS WDS-SB21-GWMSD (WDS-SB21-GW)	4-BROMOPHENYL PHENYL ETHER 4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETHER HEXACHLOROBENZENE N-NITROSODIMETHYLAMINE PHENOL	49.8 42.7 40.6 45.8 25.4 23	54.2 46.1 48.7 45.7 34.2 25.1	55.00-124.00 50.00-130.00 50.00-130.00 53.00-125.00 50.00-130.00 34.00-121.00	- - - - - -	4-BROMOPHENYL PHENYL ETHER 4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETHER HEXACHLOROBENZENE N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

Method: 6020A
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB21-GWMS (Total) WDS-SB21-GWMSD (Total) (WDS-SB21-GW)	ALUMINUM IRON POTASSIUM SODIUM	1.75 72.2 82.6 57.2	6.01 73.6 84 79.9	84.00-117.00 87.00-115.00 87.00-115.00 85.00-117.00	- - - -	ALUMINUM IRON POTASSIUM SODIUM	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB21-GWMSD (WDS-SB21-GW)	ACETONE	-	-	39.00-160.00	26.67 (25.00)	ACETONE	J(all detects)
WDS-SB21-GWMSD (WDS-SB21-GW)	1,2-DIBROMO-3-CHLOROPROPANE	-	57.3	62.00-128.00	-	1,2-DIBROMO-3-CHLOROPROPANE	J-(all detects) UJ(all non-detects)
STB-SB01-GWMS STB-SB01-GWMSD (STB-SB01-GW)	1,2-DIBROMO-3-CHLOROPROPANE	47.8	59.5	62.00-128.00	-	1,2-DIBROMO-3-CHLOROPROPANE	J-(all detects) UJ(all non-detects)
STB-SB01-GWMS (STB-SB01-GW)	METHYLENE CHLORIDE TOLUENE	125 126	- -	74.00-124.00 80.00-121.00	- -	METHYLENE CHLORIDE TOLUENE	J+(all detects)

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40170 (STB-SB01-GW STB-SB03-GW WDS-SB21-GW)	N-NITROSODIMETHYLAMINE	39.6	-	50.00-130.00	-	N-NITROSODIMETHYLAMINE	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40179 (STB-SB01-GW STB-SB03-GW WDS-SB20-GW WDS-SB21-GW)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ANTHRACENE BENZ(A)ANTHRACENE FLUORENE NAPHTHALENE PHENANTHRENE PYRENE	117 150 122 128 122 116 143 125	- - - - - - - -	41.00-115.00 39.00-114.00 53.00-119.00 59.00-120.00 50.00-118.00 43.00-114.00 53.00-115.00 53.00-121.00	- - - - - - - -	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ANTHRACENE BENZ(A)ANTHRACENE FLUORENE NAPHTHALENE PHENANTHRENE PYRENE	J+(all detects)

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40190 LCSD-40190 (WDS-SB20-GW)	BENZOIC ACID	42.6	-	50.00-130.00	61.18 (25.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)
LCS-40190 LCSD-40190 (WDS-SB20-GW)	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETHE N-NITROSODIMETHYLAMINE PHENOL	46.9 49.5 30.1 31.8	46.6 - 35.3 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETH N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)
LCS-40262 (WDS-SB21-GW)	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	48.8 39.6 31.2	- - -	50.00-130.00 50.00-130.00 34.00-121.00	- - -	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

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Trip Blank Outlier Report

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-061016-01(Initial/TOT)	6/10/2016 10:00:00 AM	ACETONE	3.1 ug/L	STB-SB01-GW STB-SB03-GW
TB-GW-061216-01(Initial/TOT)	6/12/2016 8:10:00 AM	ACETONE	2.3 ug/L	2010C-SB02-GW F100C-SB01-GW F100C-SB02-GW WDS-SB20-GW WDS-SB21-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
STB-SB01-GW(Initial/TOT)	ACETONE	13 ug/L	13U ug/L
STB-SB03-GW(Initial/TOT)	ACETONE	8.0 ug/L	10U ug/L
WDS-SB20-GW(Initial/TOT)	ACETONE	3.3 ug/L	10U ug/L
WDS-SB21-GW(Initial/TOT)	ACETONE	2.5 ug/L	10U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606422

Laboratory: RTILABS

EDD Filename: EDD_1606422_SEDD_2a_v11_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB20-GW	THALLIUM	J	0.53	2.0	LOQ	ug/L	J (all detects)
WDS-SB21-GW	BARIUM	J	19	25	LOQ	ug/L	J (all detects)
	CHROMIUM	J	2.1	10	LOQ	ug/L	
	COBALT	J	1.5	5.0	LOQ	ug/L	
	COPPER	J	0.82	5.0	LOQ	ug/L	
	LEAD	J	0.97	1.0	LOQ	ug/L	
	NICKEL	J	1.9	10	LOQ	ug/L	
	SELENIUM	J	1.5	5.0	LOQ	ug/L	
	VANADIUM	J	2.7	4.0	LOQ	ug/L	

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB20-GW	ANTIMONY	JG	0.65	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.78	1.5	LOQ	ug/L	
WDS-SB21-GW	ANTIMONY	JG	1.3	2.5	LOQ	ug/L	J (all detects)
	SILVER	JG	0.60	1.5	LOQ	ug/L	

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
STB-SB03-GW	2-Butanone [MEK]	J	5.3	10	LOQ	ug/L	J (all detects)
	ACETONE	J	8.0	10	LOQ	ug/L	
TB-GW-061016-01	ACETONE	J	3.1	10	LOQ	ug/L	J (all detects)
TB-GW-061216-01	ACETONE	J	2.3	10	LOQ	ug/L	J (all detects)
WDS-SB20-GW	ACETONE	J	3.3	10	LOQ	ug/L	J (all detects)
WDS-SB21-GW	ACETONE	J	2.5	10	LOQ	ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606425		
Date(s) of Collection:	June 10 th , 2016		
Number/Type Samples & Analyses:	16 soil samples analyzed for a project-specific list of SVOCs, SVOCs by SIM, and Metals		
Data Reviewer:	Tara Bhat AECOM/Germantown, MD		
Completed:	August 29 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for the groundwater data included in Sample Delivery Group (SDG) 1606425. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or by manual data review:

Qualifier	Explanation
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J-	The result is an estimated quantity, but the result may be biased low.
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The result is not detected. The quantitation limit may be inaccurate or imprecise.

Attachment A presents a summary of qualified data and ADR discrepancy reports. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS		
Method:	6010C	Matrix:	Soil

Sample ID: BG03-SB01-05		Collected: 6/10/2016 12:55:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.096	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.7	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: BG03-SB01-10		Collected: 6/10/2016 1:00:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.10	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.8	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: BG03-SB02-05		Collected: 6/10/2016 11:50:00 AM		Analysis Type: Dilution-1				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	17000		36	LOD	110	LOQ	mg/Kg	J+	Ms
MAGNESIUM	3500		36	LOD	360	LOQ	mg/Kg	J+	Ms
MANGANESE	280		1.8	LOD	7.2	LOQ	mg/Kg	J	Ms, Ms, Ms
POTASSIUM	2500		72	LOD	140	LOQ	mg/Kg	J+	Ms

Sample ID: BG03-SB02-05		Collected: 6/10/2016 11:50:00 AM		Analysis Type: Dilution-2				Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	16000		140	LOD	360	LOQ	mg/Kg	J+	Ms

Sample ID: BG03-SB02-05		Collected: 6/10/2016 11:50:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	2.4	X	0.72	LOD	1.4	LOQ	mg/Kg	J-	Ms
BARIUM	52	X	3.6	LOD	7.2	LOQ	mg/Kg	J+	Ms
BERYLLIUM	0.26	X	0.036	LOD	0.18	LOQ	mg/Kg	J-	Ms
CADMIUM	0.036	UX	0.036	LOD	0.18	LOQ	mg/Kg	UJ	Ms
CHROMIUM	20	X	0.29	LOD	0.36	LOQ	mg/Kg	J+	Ms
COBALT	4.8	X	0.18	LOD	0.72	LOQ	mg/Kg	J-	Ms
COPPER	38	X	0.72	LOD	3.6	LOQ	mg/Kg	J+	Ms
LEAD	3.1	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

6/10/2016 11:50:00									
Sample ID:BG03-SB02-05			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.1	UX	1.1	LOD	1.4	LOQ	mg/Kg	UJ	Ms
SILVER	0.18	UX	0.18	LOD	0.72	LOQ	mg/Kg	UJ	Ms
VANADIUM	24	X	0.72	LOD	1.8	LOQ	mg/Kg	J+	Ms
ZINC	23	X	0.36	LOD	3.6	LOQ	mg/Kg	J-	Ms

6/10/2016 11:55:00									
Sample ID:BG03-SB02-10			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.058	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.051	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.8	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

6/10/2016 12:05:00									
Sample ID:BG03-SB03-05			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3.0	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

6/10/2016 12:10:00									
Sample ID:BG03-SB03-10			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.055	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.076	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.9	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI

6/10/2016 12:35:00									
Sample ID:BG03-SB04-04			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.080	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI
LEAD	3.5	J	0.78	LOD	3.9	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C			Matrix: Soil						

6/10/2016 12:30:00									
Sample ID:BG03-SB04-05			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.3	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI, Fd
BERYLLIUM	0.085	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.067	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.1	J	0.73	LOD	3.7	LOQ	mg/Kg	J	RI

6/10/2016 12:30:00									
Sample ID:BG03-SB04-05 DUP			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	2.3		0.72	LOD	1.4	LOQ	mg/Kg	J	Fd
BERYLLIUM	0.15	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.065	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.6	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

6/10/2016 12:50:00									
Sample ID:BG03-SS01-01			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.057	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

6/10/2016 11:45:00									
Sample ID:BG03-SS02-01			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.034	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI

6/10/2016 12:00:00									
Sample ID:BG03-SS03-01			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.035	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.073	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

6/10/2016 12:25:00									
Sample ID:BG03-SS04-01			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.10	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: BG03-SS04-01		Collected: 6/10/2016 12:25:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.16	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS05-01		Collected: 6/10/2016 11:35:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.10	J	0.044	LOD	0.22	LOQ	mg/Kg	J	RI
CADMIUM	0.081	J	0.044	LOD	0.22	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS06-01		Collected: 6/10/2016 12:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.036	J	0.043	LOD	0.22	LOQ	mg/Kg	J	RI
CADMIUM	0.067	J	0.043	LOD	0.22	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS07-01		Collected: 6/10/2016 1:05:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.033	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:		Soil					

Sample ID: BG03-SB01-10		Collected: 6/10/2016 1:00:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.092	J	0.034	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: BG03-SB02-10		Collected: 6/10/2016 11:55:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.12	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: BG03-SB04-05		Collected: 6/10/2016 12:30:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.088	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI, Fd

Sample ID: BG03-SB04-05 DUP		Collected: 6/10/2016 12:30:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.15		0.035	LOD	0.14	LOQ	mg/Kg	J	Fd

Sample ID: BG03-SS01-01		Collected: 6/10/2016 12:50:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.076	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS02-01		Collected: 6/10/2016 11:45:00 AM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.097	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS03-01		Collected: 6/10/2016 12:00:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.10	J	0.039	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS04-01		Collected: 6/10/2016 12:25:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.11	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS05-01		Collected: 6/10/2016 11:35:00 AM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.084	J	0.043	LOD	0.17	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: BG03-SS06-01	Collected: 6/10/2016 12:40:00 PM		Analysis Type: Initial		Dilution: 10				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.081	J	0.045	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS07-01	Collected: 6/10/2016 1:05:00 PM		Analysis Type: Initial		Dilution: 10				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.068	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID: BG03-SS01-01	Collected: 6/10/2016 12:50:00 PM		Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	0.0015	Q	0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Lcs

Sample ID: BG03-SS03-01	Collected: 6/10/2016 12:00:00 PM		Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	0.00096	Q	0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Lcs

Sample ID: BG03-SS04-01	Collected: 6/10/2016 12:25:00 PM		Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.022	Q	0.00079	LOD	0.00079	LOQ	mg/Kg	J+	Lcs
FLUORENE	0.0021	Q	0.00079	LOD	0.00079	LOQ	mg/Kg	J+	Lcs
PHENANTHRENE	0.031	Q	0.00079	LOD	0.00079	LOQ	mg/Kg	J+	Lcs

Sample ID: BG03-SS06-01	Collected: 6/10/2016 12:40:00 PM		Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	0.0013	Q	0.00088	LOD	0.00088	LOQ	mg/Kg	J+	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8270D SIM			Matrix: Soil					

Sample ID: BG03-SS07-01		6/10/2016 1:05:00 Collected: PM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.0028	Q	0.00081	LOD	0.00081	LOQ	mg/Kg	J+	Lcs
PHENANTHRENE	0.0037	Q	0.00081	LOD	0.00081	LOQ	mg/Kg	J+	Lcs

Method Category:	SVOA								
Method:	8270D-MOD			Matrix: Soil					

Sample ID: BG03-SB02-05		6/10/2016 11:50:00 Collected: AM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.72	UX	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Ms

Sample ID: BG03-SB04-05		6/10/2016 12:30:00 Collected: PM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL) PHTHALATE	0.035	J	0.038	LOD	0.18	LOQ	mg/Kg	J	RI, Fd

Sample ID: BG03-SB04-05 DUP		6/10/2016 12:30:00 Collected: PM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL) PHTHALATE	0.036	U	0.036	LOD	0.17	LOQ	mg/Kg	UJ	Fd

Sample ID: BG03-SS01-01		6/10/2016 12:50:00 Collected: PM			Initial-BASE/ Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.27	JYZ	0.38	LOD	1.1	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS01-01		6/10/2016 12:50:00 Collected: PM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DI-N-OCTYL PHTHALATE	0.022	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: BG03-SS03-01	Collected: 6/10/2016 12:00:00 PM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.28	JYZ	0.38	LOD	1.1	LOQ	mg/Kg	J	RI

Sample ID: BG03-SS07-01	Collected: 6/10/2016 1:05:00 PM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4,6-TRICHLOROPHENOL	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-DICHLOROPHENOL	0.10	U	0.10	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	0.10	U	0.10	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-DINITROPHENOL	0.20	UY	0.20	LOD	1.0	LOQ	mg/Kg	UJ	Surr
2-CHLOROPHENOL	0.10	U	0.10	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	0.10	U	0.10	LOD	0.19	LOQ	mg/Kg	UJ	Surr
4,6-DINITRO-2-METHYLPHENOL	0.10	U	0.10	LOD	0.39	LOQ	mg/Kg	UJ	Surr
4-CHLORO-3-METHYLPHENOL	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	0.40	U	0.40	LOD	1.0	LOQ	mg/Kg	UJ	Surr
BENZOIC ACID	0.47	JYZ	0.40	LOD	1.2	LOQ	mg/Kg	J	RI, Surr
PENTACHLOROPHENOL	0.10	UY	0.10	LOD	0.19	LOQ	mg/Kg	UJ	Surr
PHENOL	0.10	U	0.10	LOD	0.19	LOQ	mg/Kg	UJ	Surr

Sample ID: BG03-SS07-01	Collected: 6/10/2016 1:05:00 PM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
1,2-DICHLOROBENZENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
1,3-DICHLOROBENZENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
1,4-DICHLOROBENZENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-DINITROTOLUENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,6-DINITROTOLUENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2-CHLORONAPHTHALENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2-NITROANILINE	0.020	U	0.020	LOD	0.39	LOQ	mg/Kg	UJ	Surr
3,3'-DICHLOROBENZIDINE	0.80	U	0.80	LOD	1.2	LOQ	mg/Kg	UJ	Surr
3-NITROANILINE	0.020	U	0.020	LOD	0.39	LOQ	mg/Kg	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL PHENYL ETHER	0.10	U	0.10	LOD	0.24	LOQ	mg/Kg	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
4-NITROANILINE	0.10	U	0.10	LOD	0.39	LOQ	mg/Kg	UJ	Surr
BENZYL ALCOHOL	0.020	U	0.020	LOD	0.80	LOQ	mg/Kg	UJ	Surr
bis(2-chloroethoxy) methane	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.020	UYZ	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
Butyl benzyl phthalate	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
CARBAZOLE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
DIBENZOFURAN	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
DIETHYL PHTHALATE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
DIMETHYL PHTHALATE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
DI-N-BUTYL PHTHALATE	0.040	U	0.040	LOD	0.19	LOQ	mg/Kg	UJ	Surr
DI-N-OCTYL PHTHALATE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBENZENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBUTADIENE	0.020	U	0.020	LOD	0.060	LOQ	mg/Kg	UJ	Surr
HEXACHLOROETHANE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
ISOPHORONE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
NITROBENZENE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
N-NITROSODIMETHYLAMINE	0.020	UY	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
N-Nitrosodi-n-propylamine	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr
N-NITROSODIPHENYLAMINE	0.020	U	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Upper Estimation
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606425

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Surrogate Outlier Report

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
BG03-SS01-01 (Initial)	Terphenyl-d14	50.6	54.00-127.00	No Affected Compounds	
BG03-SS04-01 (Initial)	Terphenyl-d14	53.5	54.00-127.00	No Affected Compounds	
BG03-SS07-01 (Initial)	2-FLUOROBIPHENYL 2-FLUOROPHENOL Nitrobenzene-d5 PHENOL-D5 Terphenyl-d14	36.8 34.7 34 32.7 40.6	44.00-115.00 35.00-115.00 37.00-122.00 33.00-122.00 54.00-127.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG03-SB02-05MS BG03-SB02-05MSD (BG03-SB02-05)	3,3'-DICHLOROBENZIDINE	0	0	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J- (all detects) UJ (all non-detects)
BG03-SB02-05MS BG03-SB02-05MSD (BG03-SB02-05)	BENZOIC ACID	188	200	40.00-117.00	-	BENZOIC ACID	J+(all detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG03-SB02-05MSD (BG03-SB02-05)	PHENANTHRENE	-	116	49.00-113.00	-	PHENANTHRENE	J+(all detects)

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG03-SB02-05MS (Dry) BG03-SB02-05MSD (Dry) (BG03-SB02-05)	MANGANESE	53.1	398	84.00-114.00	22.65 (20.00)	MANGANESE	J(all detects) UJ(all non-detects)
BG03-SB02-05MS (Dry) BG03-SB02-05MSD (Dry) (BG03-SB02-05)	ARSENIC BERYLLIUM CADMIUM COBALT SELENIUM SILVER ZINC	75.8 82.1 80.4 76.4 60.8 81.8 76.3	- - - - 69.7 - -	82.00-111.00 83.00-113.00 82.00-113.00 85.00-112.00 78.00-111.00 82.00-112.00 82.00-113.00	- - - - - - -	ARSENIC BERYLLIUM CADMIUM COBALT SELENIUM SILVER ZINC	J-(all detects) UJ(all non-detects)
BG03-SB02-05MS (Dry) BG03-SB02-05MSD (Dry) (BG03-SB02-05)	ALUMINUM BARIUM CHROMIUM COPPER IRON MAGNESIUM POTASSIUM VANADIUM	12500 125 - - 642 242 176 -	9700 - 119 129 664 180 205 117	74.00-119.00 83.00-113.00 85.00-113.00 81.00-117.00 81.00-118.00 78.00-115.00 81.00-116.00 82.00-114.00	- - - - - - - -	ALUMINUM BARIUM CHROMIUM COPPER IRON MAGNESIUM POTASSIUM VANADIUM	J+(all detects)

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40193 (BG03-SB01-05 BG03-SB01-10 BG03-SB02-05 BG03-SB02-10 BG03-SB03-05 BG03-SB03-10 BG03-SB04-04 BG03-SB04-05 BG03-SB04-05 DUP BG03-SS01-01 BG03-SS02-01 BG03-SS03-01 BG03-SS04-01 BG03-SS05-01 BG03-SS06-01 BG03-SS07-01)	BENZ(A)ANTHRACENE FLUORENE PHENANTHRENE	134 116 129	- - -	54.00-122.00 47.00-114.00 49.00-113.00	- - -	BENZ(A)ANTHRACENE FLUORENE PHENANTHRENE	J+ (all detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG03-SB04-05 (Dry)	BG03-SB04-05 DUP (Dry)			
ARSENIC	1.3	2.3	56	50.00	J (all detects)
BERYLLIUM	0.085	0.15	55	50.00	UJ (all non-detects)

Method: 6020A-TL
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG03-SB04-05 (Dry)	BG03-SB04-05 DUP (Dry)			
THALLIUM	0.088	0.15	52	50.00	J(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG03-SB04-05	BG03-SB04-05 DUP			
BIS(2-ETHYLHEXYL) PHTHALATE	0.035	0.17 U	200	50.00	J(all detects) UJ(all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG03-SB01-05	BERYLLIUM LEAD	J	0.096	0.18	LOQ	mg/Kg	J (all detects)
		J	2.7	3.6	LOQ	mg/Kg	
BG03-SB01-10	BERYLLIUM LEAD	J	0.10	0.18	LOQ	mg/Kg	J (all detects)
		J	2.8	3.7	LOQ	mg/Kg	
BG03-SB02-05	LEAD	J	3.1	3.6	LOQ	mg/Kg	J (all detects)
BG03-SB02-10	BERYLLIUM CADMIUM LEAD	J	0.058	0.18	LOQ	mg/Kg	J (all detects)
		J	0.051	0.18	LOQ	mg/Kg	
		J	2.8	3.6	LOQ	mg/Kg	
BG03-SB03-05	LEAD	J	3.0	3.6	LOQ	mg/Kg	J (all detects)
BG03-SB03-10	BERYLLIUM CADMIUM LEAD	J	0.055	0.18	LOQ	mg/Kg	J (all detects)
		J	0.076	0.18	LOQ	mg/Kg	
		J	2.9	3.5	LOQ	mg/Kg	
BG03-SB04-04	CADMIUM LEAD	J	0.080	0.20	LOQ	mg/Kg	J (all detects)
		J	3.5	3.9	LOQ	mg/Kg	
BG03-SB04-05	ARSENIC BERYLLIUM CADMIUM LEAD	J	1.3	1.5	LOQ	mg/Kg	J (all detects)
		J	0.085	0.18	LOQ	mg/Kg	
		J	0.067	0.18	LOQ	mg/Kg	
		J	2.1	3.7	LOQ	mg/Kg	
BG03-SB04-05 DUP	BERYLLIUM CADMIUM LEAD	J	0.15	0.18	LOQ	mg/Kg	J (all detects)
		J	0.065	0.18	LOQ	mg/Kg	
		J	2.6	3.6	LOQ	mg/Kg	
BG03-SS01-01	BERYLLIUM	J	0.057	0.18	LOQ	mg/Kg	J (all detects)
BG03-SS02-01	BERYLLIUM	J	0.034	0.20	LOQ	mg/Kg	J (all detects)
BG03-SS03-01	BERYLLIUM CADMIUM	J	0.035	0.19	LOQ	mg/Kg	J (all detects)
		J	0.073	0.19	LOQ	mg/Kg	
BG03-SS04-01	BERYLLIUM CADMIUM	J	0.10	0.20	LOQ	mg/Kg	J (all detects)
		J	0.16	0.20	LOQ	mg/Kg	
BG03-SS05-01	BERYLLIUM CADMIUM	J	0.10	0.22	LOQ	mg/Kg	J (all detects)
		J	0.081	0.22	LOQ	mg/Kg	
BG03-SS06-01	BERYLLIUM CADMIUM	J	0.036	0.22	LOQ	mg/Kg	J (all detects)
		J	0.067	0.22	LOQ	mg/Kg	
BG03-SS07-01	CADMIUM	J	0.033	0.19	LOQ	mg/Kg	J (all detects)

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG03-SB01-10	THALLIUM	J	0.092	0.14	LOQ	mg/Kg	J (all detects)
BG03-SB02-10	THALLIUM	J	0.12	0.14	LOQ	mg/Kg	J (all detects)
BG03-SB04-05	THALLIUM	J	0.088	0.15	LOQ	mg/Kg	J (all detects)
BG03-SS01-01	THALLIUM	J	0.076	0.15	LOQ	mg/Kg	J (all detects)
BG03-SS02-01	THALLIUM	J	0.097	0.16	LOQ	mg/Kg	J (all detects)

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606425

Laboratory: RTILABS

EDD Filename: EDD_1606425_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG03-SS03-01	THALLIUM	J	0.10	0.15	LOQ	mg/Kg	J (all detects)
BG03-SS04-01	THALLIUM	J	0.11	0.16	LOQ	mg/Kg	J (all detects)
BG03-SS05-01	THALLIUM	J	0.084	0.17	LOQ	mg/Kg	J (all detects)
BG03-SS06-01	THALLIUM	J	0.081	0.18	LOQ	mg/Kg	J (all detects)
BG03-SS07-01	THALLIUM	J	0.068	0.16	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG03-SB04-05	BIS(2-ETHYLHEXYL) PHTHALATE	J	0.035	0.18	LOQ	mg/Kg	J (all detects)
BG03-SS01-01	BENZOIC ACID	JYZ	0.27	1.1	LOQ	mg/Kg	J (all detects)
	DI-N-OCTYL PHTHALATE	J	0.022	0.18	LOQ	mg/Kg	
BG03-SS03-01	BENZOIC ACID	JYZ	0.28	1.1	LOQ	mg/Kg	J (all detects)
BG03-SS07-01	BENZOIC ACID	JYZ	0.47	1.2	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606431		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	10 soil samples for a project-specific list of lead		
Data Reviewer:	Devon Chicoine AECOM/Arlington, VA		
Completed:	August 25, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606431. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✓ Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- NA Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- ✓ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR. (no data qualifiers were assigned)

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606431

Laboratory: RTILABS

EDD Filename: EDD_1606431_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

No Data Review Qualifiers Applied.



Data Review Summary

Lab Reporting Batch ID: 1606431

EDD Filename: EDD_1606431_SEDD_2a_v1_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606465		
Date(s) of Collection:	June 13 th , 2016 – June 14 th , 2016		
Number/Type Samples & Analyses:	5 groundwater samples and 2 trip blanks for a project-specific list of VOCs, SVOCs, and PAHs		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 31 st , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606465. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

Samples FPH-SB01-GW, FPH-SB02-GW, FPH-SB03-GW, FPH-SB04-GW, and FPH-SB04-GW DUP were analyzed by the lab for 8270D SIM and regular 8270D. The final results will be presented in 8270D except for FPH-SB01-GW.

The following table defines the data qualifiers assigned by ADR and/or during manual data review of ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D	Matrix:	Water

Sample ID: FPH-SB02-GW	Collected: 6/13/2016 4:00:00 PM	Analysis Type: Initial/TOT-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.6	U	9.6	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.6	UYZ	9.6	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: FPH-SB02-GW	Collected: 6/13/2016 4:00:00 PM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	9.6	U	9.6	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.96	U	0.96	LOD	9.6	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
4-NITROANILINE	0.48	U	0.48	LOD	9.6	LOQ	ug/L	UJ	Surr
ACENAPHTHENE	10		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
ACENAPHTHYLENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
ANTHRACENE	1.5		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
BENZ(A)ANTHRACENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
Benzo (g,h,i) perylene	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	0.48	U	0.48	LOD	24	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.48	U	0.48	LOD	0.96	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.48	UYZ	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D	Matrix:	Water

Sample ID: FPH-SB02-GW 6/13/2016 4:00:00 Initial/TOT-BASE/ Dilution: 1
 Collected: PM Analysis Type: NEUTRAL

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL) PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
CARBAZOLE	1.8	J	0.48	LOD	4.8	LOQ	ug/L	J	RI, Surr
CHRYSENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
DIBENZO(A,H)ANTHRACENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.48	U	0.48	LOD	3.8	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.70		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
FLUORENE	11		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
HEXACHLOROBENZENE	0.48	U	0.48	LOD	0.96	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.48	U	0.48	LOD	0.96	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.96	U	0.96	LOD	4.8	LOQ	ug/L	UJ	Surr
NAPHTHALENE	44		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
NITROBENZENE	0.48	U	0.48	LOD	2.9	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.48	UY	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
PHENANTHRENE	22		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
PYRENE	1.4		0.14	LOD	0.19	LOQ	ug/L	J-	Surr

Sample ID: FPH-SB03-GW 6/13/2016 3:00:00 Initial/TOT-ACID Dilution: 1
 Collected: PM Analysis Type:

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.4	U	9.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.4	UYZ	9.4	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D
Matrix: Water

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.94	U	0.94	LOD	4.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	9.4	U	9.4	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.94	U	0.94	LOD	9.4	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	2.4	U	2.4	LOD	4.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	0.47	U	0.47	LOD	9.4	LOQ	ug/L	UJ	Surr
ACENAPHTHENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
ACENAPHTHYLENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.64		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
Benzo (g,h,i) perylene	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.26		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
BENZO(B)FLUORANTHENE	0.38		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
BENZO(K)FLUORANTHENE	0.12	J	0.14	LOD	0.19	LOQ	ug/L	J	RI, Surr
BENZYL ALCOHOL	0.47	U	0.47	LOD	24	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.47	U	0.47	LOD	0.94	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.47	UYZ	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
CHRYSENE	0.68		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.47	U	0.47	LOD	3.8	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D			Matrix: Water						

Sample ID: FPH-SB03-GW		Collected: 6/13/2016 3:00:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIMETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
FLUORANTHENE	4.3		0.14	LOD	0.19	LOQ	ug/L	J-	Surr
FLUORENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.47	U	0.47	LOD	0.94	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.47	U	0.47	LOD	0.94	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.94	U	0.94	LOD	4.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	0.47	U	0.47	LOD	2.8	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.47	UY	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
PYRENE	8.5		0.14	LOD	0.19	LOQ	ug/L	J-	Surr

Sample ID: FPH-SB04-GW		Collected: 6/13/2016 1:45:00 PM			Analysis Type: Dilution-1/TOT-BASE/NEUTRAL			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	180		1.4	LOD	1.9	LOQ	ug/L	J	Fd
2-METHYLNAPHTHALENE	310		1.4	LOD	1.9	LOQ	ug/L	J	Fd
NAPHTHALENE	92		1.4	LOD	1.9	LOQ	ug/L	J	Fd

Sample ID: FPH-SB04-GW		Collected: 6/13/2016 1:45:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.4	U	9.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.4	UYZ	9.4	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D	Matrix:	Water

Sample ID:FPH-SB04-GW		6/13/2016 1:45:00 Collected: PM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	14		0.14	LOD	0.19	LOQ	ug/L	J	Fd
BENZ(A)ANTHRACENE	0.23		0.14	LOD	0.19	LOQ	ug/L	J	Fd
CHRYSENE	0.11	J	0.14	LOD	0.19	LOQ	ug/L	J	RI, Fd
DIBENZOFURAN	9.5		0.47	LOD	3.8	LOQ	ug/L	J	Fd
FLUORANTHENE	1.0		0.14	LOD	0.19	LOQ	ug/L	J	Fd
FLUORENE	19		0.14	LOD	0.19	LOQ	ug/L	J	Fd
N-NITROSODIMETHYLAMINE	0.47	UY	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs
PHENANTHRENE	38		0.14	LOD	0.19	LOQ	ug/L	J	Fd
PYRENE	2.3		0.14	LOD	0.19	LOQ	ug/L	J	Fd

Sample ID:FPH-SB04-GW DUP		6/13/2016 1:45:00 Collected: PM			Dilution-1/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	110		2.9	LOD	3.8	LOQ	ug/L	J	Fd
2-METHYLNAPHTHALENE	190		2.9	LOD	3.8	LOQ	ug/L	J	Fd

Sample ID:FPH-SB04-GW DUP		6/13/2016 1:45:00 Collected: PM			Initial/TOT-ACID Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.5	U	9.5	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.5	UYZ	9.5	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID:FPH-SB04-GW DUP		6/13/2016 1:45:00 Collected: PM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	9.2		0.14	LOD	0.19	LOQ	ug/L	J	Fd
BENZ(A)ANTHRACENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Fd
CHRYSENE	0.14	U	0.14	LOD	0.19	LOQ	ug/L	UJ	Fd
DIBENZOFURAN	0.48	U	0.48	LOD	3.8	LOQ	ug/L	UJ	Fd
FLUORANTHENE	0.58		0.14	LOD	0.19	LOQ	ug/L	J	Fd
FLUORENE	11		0.14	LOD	0.19	LOQ	ug/L	J	Fd

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D **Matrix:** Water

Sample ID: FPH-SB04-GW DUP **Collected:** 6/13/2016 1:45:00 PM **Analysis Type:** Initial/TOT-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	43		0.14	LOD	0.19	LOQ	ug/L	J	Fd
N-NITROSODIMETHYLAMINE	0.48	UY	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs
PHENANTHRENE	24		0.14	LOD	0.19	LOQ	ug/L	J	Fd
PYRENE	0.96		0.14	LOD	0.19	LOQ	ug/L	J	Fd

Method Category: SVOA
Method: 8270D SIM **Matrix:** Water

Sample ID: FPH-SB01-GW **Collected:** 6/14/2016 8:50:00 AM **Analysis Type:** Dilution-1/TOT-BASE/NEUTRAL **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORENE	2.0		0.096	LOD	0.096	LOQ	ug/L	J+	Lcs

Sample ID: FPH-SB01-GW **Collected:** 6/14/2016 8:50:00 AM **Analysis Type:** Initial/TOT-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.55	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
2-METHYLNAPHTHALENE	0.35	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
ANTHRACENE	0.029	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
NAPHTHALENE	0.40	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs
PHENANTHRENE	0.082	Q	0.019	LOD	0.019	LOQ	ug/L	J+	Lcs

Method Category: SVOA
Method: 8270D-MOD **Matrix:** Water

Sample ID: FPH-SB01-GW **Collected:** 6/14/2016 8:50:00 AM **Analysis Type:** Initial/TOT-ACID **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UY	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	16	JYZ	2.4	LOD	24	LOQ	ug/L	J	RI, Lcs, Lcs
PHENOL	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: FPH-SB01-GW Collected: 6/14/2016 8:50:00 AM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	2.4	U	2.4	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.95	U	0.95	LOD	9.5	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
4-NITROANILINE	2.4	U	2.4	LOD	9.5	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	2.4	U	2.4	LOD	24	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	2.4	UY	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	2.4	UY	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UYZ	2.4	LOD	4.8	LOQ	ug/L	UJ	Lcs, Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.95	U	0.95	LOD	3.8	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
NITROBENZENE	2.4	U	2.4	LOD	2.9	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.95	UY	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: FPH-SB01-GW	Collected: 6/14/2016 8:50:00 AM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIPHENYLAMINE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr

Method Category: VOA
Method: 8260C
Matrix: Water

Sample ID: FPH-SB01-GW	Collected: 6/14/2016 8:50:00 AM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	9.3	J	5.0	LOD	10	LOQ	ug/L	J	RI
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
ACETONE	9.2	JY	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CARBON DISULFIDE	0.96	J	0.60	LOD	1.0	LOQ	ug/L	J	RI
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	1.0		0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.40	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID: FPH-SB02-GW	Collected: 6/13/2016 4:00:00 PM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	14		0.60	LOD	10	LOQ	ug/L	U	Tb
CARBON DISULFIDE	0.77	J	0.60	LOD	1.0	LOQ	ug/L	J	RI

Sample ID: FPH-SB03-GW	Collected: 6/13/2016 3:00:00 PM	Analysis Type: Initial/TOT	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
ACETONE	7.9	JY	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: FPH-SB03-GW		Collected: 6/13/2016 3:00:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CARBON DISULFIDE	0.98	J	0.60	LOD	1.0	LOQ	ug/L	J	RI
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	1.2		0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	31	Q	0.60	LOD	1.0	LOQ	ug/L	J-	Lcs
METHYLENE CHLORIDE	0.40	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
TOLUENE	0.61	J	0.60	LOD	1.0	LOQ	ug/L	J	RI
Xylene (Total)	56	Q	1.8	LOD	3.0	LOQ	ug/L	J-	Lcs

Sample ID: FPH-SB04-GW		Collected: 6/13/2016 1:45:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	5.0	U	5.0	LOD	10	LOQ	ug/L	UJ	Fd
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
ACETONE	15	Y	0.60	LOD	10	LOQ	ug/L	UJ	Mb, Fd, Tb
BENZENE	0.49	J	0.60	LOD	1.0	LOQ	ug/L	J	RI, Fd
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	1.1		0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	2.6	Q	0.60	LOD	1.0	LOQ	ug/L	J	Lcs, Fd
METHYLENE CHLORIDE	0.27	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.9	JQ	1.8	LOD	3.0	LOQ	ug/L	J	RI, Lcs, Fd

Sample ID: FPH-SB04-GW DUP		Collected: 6/13/2016 1:45:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	4.7	J	5.0	LOD	10	LOQ	ug/L	J	RI, Fd
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: FPH-SB04-GW DUP		Collected: 6/13/2016 1:45:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	10	Y	0.60	LOD	10	LOQ	ug/L	UJ	Mb, Fd, Tb
BENZENE	1.6		0.60	LOD	1.0	LOQ	ug/L	J	Fd
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	1.1		0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	18	Q	0.60	LOD	1.0	LOQ	ug/L	J	Lcs, Fd
METHYLENE CHLORIDE	0.28	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	17	Q	1.8	LOD	3.0	LOQ	ug/L	J	Lcs, Fd

Sample ID: TB-GW-061316-01		Collected: 6/13/2016 8:30:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
ACETONE	8.0	JY	0.60	LOD	10	LOQ	ug/L	U	Mb
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	1.5		0.60	LOD	1.0	LOQ	ug/L	U	Mb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.62	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID: TB-GW-061416-01		Collected: 6/14/2016 8:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
ACETONE	4.9	JY	0.60	LOD	10	LOQ	ug/L	U	Mb
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID: TB-GW-061416-01 Collected: 6/14/2016 8:00:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROMETHANE	1.2		0.60	LOD	1.0	LOQ	ug/L	U	Mb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.52	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606465

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0626	6/26/2016 4:52:00 PM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	1.9 ug/L 0.43 ug/L 0.66 ug/L	FPH-SB01-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP TB-GW-061316-01 TB-GW-061416-01

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
FPH-SB01-GW(Initial/TOT)	ACETONE	9.2 ug/L	10U ug/L
FPH-SB01-GW(Initial/TOT)	CHLOROMETHANE	1.0 ug/L	1.0U ug/L
FPH-SB01-GW(Initial/TOT)	METHYLENE CHLORIDE	0.40 ug/L	5.0U ug/L
FPH-SB03-GW(Initial/TOT)	ACETONE	7.9 ug/L	10U ug/L
FPH-SB03-GW(Initial/TOT)	CHLOROMETHANE	1.2 ug/L	1.2U ug/L
FPH-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.40 ug/L	5.0U ug/L
FPH-SB04-GW DUP(Initial/TOT)	ACETONE	10 ug/L	10U ug/L
FPH-SB04-GW DUP(Initial/TOT)	CHLOROMETHANE	1.1 ug/L	1.1U ug/L
FPH-SB04-GW DUP(Initial/TOT)	METHYLENE CHLORIDE	0.28 ug/L	5.0U ug/L
FPH-SB04-GW(Initial/TOT)	ACETONE	15 ug/L	15U ug/L
FPH-SB04-GW(Initial/TOT)	CHLOROMETHANE	1.1 ug/L	1.1U ug/L
FPH-SB04-GW(Initial/TOT)	METHYLENE CHLORIDE	0.27 ug/L	5.0U ug/L
TB-GW-061316-01(Initial/TOT)	ACETONE	8.0 ug/L	10U ug/L
TB-GW-061316-01(Initial/TOT)	CHLOROMETHANE	1.5 ug/L	1.5U ug/L
TB-GW-061316-01(Initial/TOT)	METHYLENE CHLORIDE	0.62 ug/L	5.0U ug/L
TB-GW-061416-01(Initial/TOT)	ACETONE	4.9 ug/L	10U ug/L
TB-GW-061416-01(Initial/TOT)	CHLOROMETHANE	1.2 ug/L	1.2U ug/L
TB-GW-061416-01(Initial/TOT)	METHYLENE CHLORIDE	0.52 ug/L	5.0U ug/L

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
FPH-SB01-GW (Initial/TOT)	TOLUENE-D8	88.7	89.00-112.00	No Affected Compounds	
FPH-SB02-GW (Initial/TOT)	4-Bromofluorobenzene	124	85.00-114.00	No Affected Compounds	
FPH-SB03-GW (Initial/TOT)	4-Bromofluorobenzene	124	85.00-114.00	No Affected Compounds	
FPH-SB04-GW (Initial/TOT)	TOLUENE-D8	87.8	89.00-112.00	No Affected Compounds	
TB-GW-061316-01 (Initial/TOT)	TOLUENE-D8	88	89.00-112.00	No Affected Compounds	
TB-GW-061416-01 (Initial/TOT)	TOLUENE-D8	88.9	89.00-112.00	No Affected Compounds	

Method: 8270D
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
FPH-SB02-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5 Terphenyl-d14	34.2 31.3 14.6 38.4	44.00-119.00 44.00-120.00 30.00-130.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
FPH-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5 Terphenyl-d14	43.3 41.6 22.7 46.6	44.00-119.00 44.00-120.00 30.00-130.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
FPH-SB04-GW DUP (Initial/TOT)	PHENOL-D5	21.4	30.00-130.00	No Affected Compounds	
FPH-SB04-GW (Initial/TOT)	PHENOL-D5	21.6	30.00-130.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
FPH-SB02-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	281 331	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J+(all detects)
FPH-SB03-GW (Initial/TOT)	Terphenyl-d14	14.8	50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
FPH-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	653 180	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J+(all detects)
FPH-SB04-GW (Initial/TOT)	2-FLUOROBIPHENYL	27.6	44.00-119.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
FPH-SB04-GW (Initial/TOT)	Terphenyl-d14	150	50.00-134.00	All Base/Neutral Target Analytes	J+(all detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

Surrogate Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
FPH-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL	38.4	44.00-119.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
	Nitrobenzene-d5	35	44.00-120.00		
	PHENOL-D5	27.4	30.00-130.00		
	Terphenyl-d14	27.1	50.00-134.00		

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40179 (FPH-SB01-GW FPH-SB02-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ANTHRACENE BENZ(A)ANTHRACENE FLUORENE NAPHTHALENE PHENANTHRENE PYRENE	117 150 122 128 122 116 143 125	- - - - - - - -	41.00-115.00 39.00-114.00 53.00-119.00 59.00-120.00 50.00-118.00 43.00-114.00 53.00-115.00 53.00-121.00	- - - - - - - -	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ANTHRACENE BENZ(A)ANTHRACENE FLUORENE NAPHTHALENE PHENANTHRENE PYRENE	J+ (all detects)

Method: 8270D
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-1-40190 LCSD-1-40190 (FPH-SB01-GW FPH-SB02-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP)	BENZOIC ACID	42.6	-	50.00-130.00	61.18 (25.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)
LCS-1-40190 LCSD-1-40190 (FPH-SB01-GW FPH-SB02-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP)	4-NITROPHENOL N-NITROSODIMETHYLAMINE PHENOL	46.9 30.1 31.8	46.6 35.3 -	50.00-130.00 50.00-130.00 34.00-121.00	- - -	4-NITROPHENOL N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40190 LCSD-40190 (FPH-SB01-GW FPH-SB02-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP)	BENZOIC ACID	42.6	-	50.00-130.00	61.18 (25.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)
LCS-40190 LCSD-40190 (FPH-SB01-GW FPH-SB02-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP)	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETHE N-NITROSODIMETHYLAMINE PHENOL	46.9 49.5 30.1 31.8	46.6 - 35.3 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETH N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06261	2-HEXANONE	-	55.6	57.00-139.00	-	2-HEXANONE	J-(all detects) UJ(all non-detects)
VOA11B LCSD 0626	BROMOFORM	63.1	61.9	66.00-130.00	-	BROMOFORM	
(FPH-SB01-GW	CHLORODIBROMOMETHANE	66.5	64.8	74.00-126.00	-	CHLORODIBROMOMETHANE	
FPH-SB03-GW	CIS-1,3-DICHLOROPROPENE	67.7	64	75.00-124.00	-	CIS-1,3-DICHLOROPROPENE	
FPH-SB04-GW	ETHYLBENZENE	-	78.1	79.00-121.00	-	ETHYLBENZENE	
FPH-SB04-GW DUP	STYRENE	-	71.1	78.00-123.00	-	STYRENE	
TB-GW-061316-01	Xylene (Total)	-	75.3	79.00-121.00	-	Xylene (Total)	
TB-GW-061416-01)							

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	FPH-SB04-GW	FPH-SB04-GW DUP			
2-Butanone [MEK]	10 U	4.7	200	30.00	J (all detects) UJ (all non-detects)
ACETONE	15	10	40	30.00	
BENZENE	0.49	1.6	106	30.00	
ETHYLBENZENE	2.6	18	150	30.00	
Xylene (Total)	1.9	17	160	30.00	

Method: 8270D SIM
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	FPH-SB04-GW	FPH-SB04-GW DUP			
1-METHYLNAPHTHALENE	1000	83	169	30.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	1800	140	171	30.00	
ACENAPHTHENE	140	7.5	180	30.00	
ACENAPHTHYLENE	17	0.45	190	30.00	
ANTHRACENE	20	0.72	186	30.00	
BENZ(A)ANTHRACENE	0.95 U	0.13	200	30.00	
BENZO(A)PYRENE	0.070	0.029	83	30.00	
BENZO(B)FLUORANTHENE	0.28	0.048	141	30.00	
BENZO(G,H,I)PERYLENE	0.038	0.019 U	200	30.00	
BENZO(K)FLUORANTHENE	0.019 U	0.028	200	30.00	
CHRYSENE	0.95 U	0.052	200	30.00	
DIBENZO(A,H)ANTHRACENE	0.021	0.019 U	200	30.00	
FLUORANTHENE	5.6	0.25	183	30.00	
FLUORENE	150	6.8	183	30.00	
INDENO(1,2,3-CD)PYRENE	0.036	0.019 U	200	30.00	
NAPHTHALENE	390	62	145	30.00	
PHENANTHRENE	360	12	187	30.00	
PYRENE	10	0.44	183	30.00	

Method: 8270D
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	FPH-SB04-GW	FPH-SB04-GW DUP			
1-METHYLNAPHTHALENE	180	110	48	30.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	310	190	48	30.00	
ACENAPHTHENE	14	9.2	41	30.00	
BENZ(A)ANTHRACENE	0.23	0.19 U	200	30.00	
CHRYSENE	0.11	0.19 U	200	30.00	
DIBENZOFURAN	9.5	3.8 U	200	30.00	
FLUORANTHENE	1.0	0.58	53	30.00	
FLUORENE	19	11	53	30.00	
NAPHTHALENE	92	43	73	30.00	
PHENANTHRENE	38	24	45	30.00	
PYRENE	2.3	0.96	82	30.00	

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-061316-01(Initial/TOT)	6/13/2016 8:30:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	8 ug/L 1.5 ug/L 0.62 ug/L	FPH-SB02-GW FPH-SB03-GW FPH-SB04-GW FPH-SB04-GW DUP
TB-GW-061416-01(Initial/TOT)	6/14/2016 8:00:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	4.9 ug/L 1.2 ug/L 0.52 ug/L	FPH-SB01-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
FPH-SB01-GW(Initial/TOT)	ACETONE	9.2 ug/L	10U ug/L
FPH-SB01-GW(Initial/TOT)	CHLOROMETHANE	1.0 ug/L	1.0U ug/L
FPH-SB01-GW(Initial/TOT)	METHYLENE CHLORIDE	0.40 ug/L	5.0U ug/L
FPH-SB02-GW(Initial/TOT)	ACETONE	14 ug/L	14U ug/L
FPH-SB03-GW(Initial/TOT)	ACETONE	7.9 ug/L	10U ug/L
FPH-SB03-GW(Initial/TOT)	CHLOROMETHANE	1.2 ug/L	1.2U ug/L
FPH-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.40 ug/L	5.0U ug/L
FPH-SB04-GW DUP(Initial/TOT)	ACETONE	10 ug/L	10U ug/L
FPH-SB04-GW DUP(Initial/TOT)	CHLOROMETHANE	1.1 ug/L	1.1U ug/L
FPH-SB04-GW DUP(Initial/TOT)	METHYLENE CHLORIDE	0.28 ug/L	5.0U ug/L
FPH-SB04-GW(Initial/TOT)	ACETONE	15 ug/L	15U ug/L
FPH-SB04-GW(Initial/TOT)	CHLOROMETHANE	1.1 ug/L	1.1U ug/L
FPH-SB04-GW(Initial/TOT)	METHYLENE CHLORIDE	0.27 ug/L	5.0U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606465

Laboratory: RTILABS

EDD Filename: EDD_1606465_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FPH-SB01-GW	2-Butanone [MEK]	J	9.3	10	LOQ	ug/L	J (all detects)
	ACETONE	JY	9.2	10	LOQ	ug/L	
	CARBON DISULFIDE	J	0.96	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.40	5.0	LOQ	ug/L	
FPH-SB02-GW	CARBON DISULFIDE	J	0.77	1.0	LOQ	ug/L	J (all detects)
FPH-SB03-GW	ACETONE	JY	7.9	10	LOQ	ug/L	J (all detects)
	CARBON DISULFIDE	J	0.98	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.40	5.0	LOQ	ug/L	
	TOLUENE	J	0.61	1.0	LOQ	ug/L	
FPH-SB04-GW	BENZENE	J	0.49	1.0	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.27	5.0	LOQ	ug/L	
	Xylene (Total)	JQ	1.9	3.0	LOQ	ug/L	
FPH-SB04-GW DUP	2-Butanone [MEK]	J	4.7	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.28	5.0	LOQ	ug/L	
TB-GW-061316-01	ACETONE	JY	8.0	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.62	5.0	LOQ	ug/L	
TB-GW-061416-01	ACETONE	JY	4.9	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.52	5.0	LOQ	ug/L	

Method: 8270D
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FPH-SB02-GW	CARBAZOLE	J	1.8	4.8	LOQ	ug/L	J (all detects)
FPH-SB03-GW	BENZO(K)FLUORANTHENE	J	0.12	0.19	LOQ	ug/L	J (all detects)
FPH-SB04-GW	CHRYSENE	J	0.11	0.19	LOQ	ug/L	J (all detects)

Method: 8270D-MOD
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FPH-SB01-GW	BENZOIC ACID	JYZ	16	24	LOQ	ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606512		
Date(s) of Collection:	June 13 th , 2016		
Number/Type Samples & Analyses:	14 soil samples for a project-specific list of SVOCs, PCBs, lead, and metals		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 30 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606512. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or during manual data review of ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID:H5-SS01-01		6/13/2016 9:50:00			Analysis Type: Initial			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.5	J	1.0	LOD	2.1	LOQ	mg/Kg	J	RI
ARSENIC	2.6	J	2.1	LOD	4.1	LOQ	mg/Kg	J	RI
COBALT	1.4	J	0.51	LOD	2.1	LOQ	mg/Kg	J	RI
SILVER	0.58	J	0.51	LOD	2.1	LOQ	mg/Kg	J	RI
NICKEL	4.4	J	2.1	LOD	10	LOQ	mg/Kg	J	RI

Sample ID:H5-SS01-02		6/13/2016 9:55:00			Analysis Type: Initial			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.074	J	0.045	LOD	0.23	LOQ	mg/Kg	J	RI
COBALT	0.90	J	0.23	LOD	0.91	LOQ	mg/Kg	J	RI
NICKEL	3.9	J	0.91	LOD	4.5	LOQ	mg/Kg	J	RI

Sample ID:H5-SS02-01		6/13/2016 9:15:00			Analysis Type: Initial			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.1	J	1.2	LOD	2.5	LOQ	mg/Kg	J	RI, Fd
ARSENIC	2.7	J	2.5	LOD	4.9	LOQ	mg/Kg	J	RI
BERYLLIUM	0.43	J	0.12	LOD	0.62	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.53	J	0.12	LOD	0.62	LOQ	mg/Kg	J	RI, Fd
CHROMIUM	5.0		0.99	LOD	1.2	LOQ	mg/Kg	J	Fd
COBALT	0.90	J	0.62	LOD	2.5	LOQ	mg/Kg	J	RI, Fd
COPPER	18		2.5	LOD	12	LOQ	mg/Kg	J	Fd
MAGNESIUM	230		12	LOD	120	LOQ	mg/Kg	J	Fd
MANGANESE	20		0.62	LOD	2.5	LOQ	mg/Kg	J	Fd
NICKEL	4.3	J	2.5	LOD	12	LOQ	mg/Kg	J	RI, Fd
POTASSIUM	260		25	LOD	49	LOQ	mg/Kg	J	Fd
SELENIUM	3.7	U	3.7	LOD	4.9	LOQ	mg/Kg	UJ	Fd
SILVER	0.23	J	0.62	LOD	2.5	LOQ	mg/Kg	J	RI, Fd
SODIUM	220		12	LOD	120	LOQ	mg/Kg	J	Fd
VANADIUM	9.5		2.5	LOD	6.2	LOQ	mg/Kg	J	Fd
ZINC	50		1.2	LOD	12	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C			Matrix: Soil						

6/13/2016 9:15:00									
Sample ID: H5-SS02-01 DUP			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	23		1.2	LOD	2.4	LOQ	mg/Kg	J	Fd
ARSENIC	4.2	J	2.4	LOD	4.7	LOQ	mg/Kg	J	RI
BERYLLIUM	20		0.12	LOD	0.59	LOQ	mg/Kg	J	Fd
CADMIUM	20		0.12	LOD	0.59	LOQ	mg/Kg	J	Fd
CHROMIUM	26		0.94	LOD	1.2	LOQ	mg/Kg	J	Fd
COBALT	23		0.59	LOD	2.4	LOQ	mg/Kg	J	Fd
COPPER	41		2.4	LOD	12	LOQ	mg/Kg	J	Fd
MAGNESIUM	460		12	LOD	120	LOQ	mg/Kg	J	Fd
MANGANESE	40		0.59	LOD	2.4	LOQ	mg/Kg	J	Fd
NICKEL	28		2.4	LOD	12	LOQ	mg/Kg	J	Fd
POTASSIUM	490		24	LOD	47	LOQ	mg/Kg	J	Fd
SELENIUM	4.8		3.5	LOD	4.7	LOQ	mg/Kg	J	Fd
SILVER	9.5		0.59	LOD	2.4	LOQ	mg/Kg	J	Fd
SODIUM	500		12	LOD	120	LOQ	mg/Kg	J	Fd
VANADIUM	26		2.4	LOD	5.9	LOQ	mg/Kg	J	Fd
ZINC	150		1.2	LOD	12	LOQ	mg/Kg	J	Fd

6/13/2016 9:20:00									
Sample ID: H5-SS02-02			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.77	J	1.0	LOD	2.0	LOQ	mg/Kg	J	RI
LEAD	4.3	J	1.0	LOD	5.1	LOQ	mg/Kg	J	RI
NICKEL	3.0	J	1.0	LOD	5.1	LOQ	mg/Kg	J	RI
SILVER	0.67	J	0.25	LOD	1.0	LOQ	mg/Kg	J	RI

6/13/2016 1:20:00									
Sample ID: WDS-SB08-05			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.080	J	0.043	LOD	0.22	LOQ	mg/Kg	J	RI
CADMIUM	0.071	J	0.043	LOD	0.22	LOQ	mg/Kg	J	RI
NICKEL	4.0	J	0.87	LOD	4.3	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID: WDS-SB09-06		Collected: 6/13/2016 1:05:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.69	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.15	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.9	J	0.73	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB11-08		Collected: 6/13/2016 10:40:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.071	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB12-05		Collected: 6/13/2016 8:35:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.033	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.8	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB13-05		Collected: 6/13/2016 8:20:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.4	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.15	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.049	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

Method Category:	METALS	
Method:	6010C-STAR	Matrix: Soil

Sample ID: H5-SS04-01		Collected: 6/13/2016 9:05:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	7.7	J	4.2	LOD	21	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C-STAR	Matrix:	Soil						

Sample ID: H5-SS04-02		Collected: 6/13/2016 9:10:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	5.0	J	1.5	LOD	7.5	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID: H5-SS01-02		Collected: 6/13/2016 9:55:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.078	J	0.046	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: H5-SS02-02		Collected: 6/13/2016 9:20:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.068	J	0.051	LOD	0.21	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB08-05		Collected: 6/13/2016 1:20:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.10	JG	0.044	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB09-06		Collected: 6/13/2016 1:05:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.091	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB11-08		Collected: 6/13/2016 10:40:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.10	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL	Matrix:		Soil						

Sample ID: WDS-SB12-05		Collected: 6/13/2016 8:35:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.076	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: WDS-SB13-05		Collected: 6/13/2016 8:20:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.073	J	0.036	LOD	0.15	LOQ	mg/Kg	J	RI	

Method Category:	SVOA									
Method:	8082A	Matrix:		Soil						

Sample ID: H5-SS01-01		Collected: 6/13/2016 9:50:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1221	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1232	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1242	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1248	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1254	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1260	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
Aroclor 1262	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	
Aroclor 1268	0.021	U	0.021	LOD	0.10	LOQ	mg/Kg	UJ	Surr	

Sample ID: H5-SS02-01		Collected: 6/13/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1221	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1232	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1242	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1248	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1254	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr	

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8082A			Matrix: Soil						

Sample ID: H5-SS02-01		Collected: 6/13/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr

Sample ID: H5-SS02-01 DUP		Collected: 6/13/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.024	U	0.024	LOD	0.12	LOQ	mg/Kg	UJ	Surr

Sample ID: H5-SS03-01		Collected: 6/13/2016 9:35:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.028	U	0.028	LOD	0.14	LOQ	mg/Kg	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8082A	Matrix:		Soil					

Sample ID:H5-SS03-02		6/13/2016 9:40:00			Analysis Type: Initial			Dilution: 1		
		Collected: AM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1221	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1232	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1242	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1248	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1254	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1260	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
Aroclor 1262	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	
Aroclor 1268	0.027	U	0.027	LOD	0.13	LOQ	mg/Kg	UJ	Surr	

Sample ID:H5-SS04-02		6/13/2016 9:10:00			Analysis Type: Initial			Dilution: 1		
		Collected: AM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1221	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1232	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1242	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1248	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1254	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1260	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
Aroclor 1262	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	
Aroclor 1268	0.015	U	0.015	LOD	0.075	LOQ	mg/Kg	UJ	Surr	

Method Category:	SVOA								
Method:	8270D SIM	Matrix:		Soil					

Sample ID:H5-SS02-01		6/13/2016 9:15:00			Initial-BASE/			Dilution: 1		
		Collected: AM			Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1-METHYLNAPHTHALENE	0.0043		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd	
2-METHYLNAPHTHALENE	0.0041		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd	
ACENAPHTHENE	0.0030		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd	

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Sample ID: H5-SS02-01 Collected: 6/13/2016 9:15:00 AM Analysis Type: Initial-BASE/NEUTRAL Dilution: 1									
ACENAPHTHYLENE	0.0070		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.0098		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.018		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.019	Y	0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
DIBENZO(A,H)ANTHRACENE	0.0028		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
FLUORENE	0.0052		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.015		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.0066		0.0025	LOD	0.0025	LOQ	mg/Kg	J	Fd

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Sample ID: H5-SS02-01 DUP Collected: 6/13/2016 9:15:00 AM Analysis Type: Initial-BASE/NEUTRAL Dilution: 3									
1-METHYLNAPHTHALENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
2-METHYLNAPHTHALENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
ACENAPHTHENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
ACENAPHTHYLENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
ANTHRACENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
BENZO(G,H,I)PERYLENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
BENZO(K)FLUORANTHENE	0.036	UY	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
DIBENZO(A,H)ANTHRACENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
FLUORENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
INDENO(1,2,3-CD)PYRENE	0.036	U	0.036	LOD	0.036	LOQ	mg/Kg	UJ	Fd
PHENANTHRENE	0.059		0.036	LOD	0.036	LOQ	mg/Kg	J	Fd

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Sample ID: WDS-SB08-05 Collected: 6/13/2016 1:20:00 PM Analysis Type: Dilution-1-BASE/NEUTRAL Dilution: 3									
BENZ(A)ANTHRACENE	0.025	H	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Ms, EtoA
BENZO(B)FLUORANTHENE	0.031	H	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Ms, EtoA
CHRYSENE	0.024	H	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Ms, EtoA
FLUORANTHENE	0.048	H	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Ms, EtoA
PYRENE	0.043	H	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Ms, EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.0045		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms
ACENAPHTHYLENE	0.0050		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms
ANTHRACENE	0.043		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms, Ms
BENZO(A)PYRENE	0.041		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms
BENZO(G,H,I)PERYLENE	0.020		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms, Ms
BENZO(K)FLUORANTHENE	0.025		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms
DIBENZO(A,H)ANTHRACENE	0.0012		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms
FLUORENE	0.0048		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms
INDENO(1,2,3-CD)PYRENE	0.019		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms, Ms
PHENANTHRENE	0.042		0.00088	LOD	0.00088	LOQ	mg/Kg	J	Ms, Ms, Ms

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2,4,6-TRICHLOROPHENOL	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2,4-DICHLOROPHENOL	0.77	U	0.77	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	0.77	U	0.77	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2,4-DINITROPHENOL	1.5	UY	1.5	LOD	7.6	LOQ	mg/Kg	UJ	Surr
2-CHLOROPHENOL	0.77	U	0.77	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	0.77	U	0.77	LOD	1.5	LOQ	mg/Kg	UJ	Surr
4,6-DINITRO-2-METHYLPHENOL	0.77	U	0.77	LOD	2.9	LOQ	mg/Kg	UJ	Surr
4-CHLORO-3-METHYLPHENOL	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	3.1	U	3.1	LOD	7.6	LOQ	mg/Kg	UJ	Surr
BENZOIC ACID	3.1	UYZ	3.1	LOD	9.2	LOQ	mg/Kg	UJ	Surr
PENTACHLOROPHENOL	0.77	UY	0.77	LOD	1.5	LOQ	mg/Kg	UJ	Surr
PHENOL	0.77	U	0.77	LOD	1.5	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
1,2-DICHLOROBENZENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
1,3-DICHLOROBENZENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
1,4-DICHLOROBENZENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2,4-DINITROTOLUENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2,6-DINITROTOLUENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2-CHLORONAPHTHALENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
2-NITROANILINE	0.15	U	0.15	LOD	2.9	LOQ	mg/Kg	UJ	Surr
3,3'-DICHLOROBENZIDINE	6.1	U	6.1	LOD	9.2	LOQ	mg/Kg	UJ	Lcs, Surr
3-NITROANILINE	0.15	U	0.15	LOD	2.9	LOQ	mg/Kg	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.77	U	0.77	LOD	1.8	LOQ	mg/Kg	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
4-NITROANILINE	0.77	U	0.77	LOD	2.9	LOQ	mg/Kg	UJ	Surr
BENZYL ALCOHOL	0.15	U	0.15	LOD	6.1	LOQ	mg/Kg	UJ	Surr
bis(2-chloroethoxy) methane	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.15	UZ	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
Butyl benzyl phthalate	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
CARBAZOLE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
DIBENZOFURAN	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
DIETHYL PHTHALATE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
DIMETHYL PHTHALATE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
DI-N-BUTYL PHTHALATE	0.31	U	0.31	LOD	1.5	LOQ	mg/Kg	UJ	Surr
DI-N-OCTYL PHTHALATE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBENZENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBUTADIENE	0.15	U	0.15	LOD	0.46	LOQ	mg/Kg	UJ	Surr
HEXACHLOROETHANE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
ISOPHORONE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
NITROBENZENE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
N-NITROSODIMETHYLAMINE	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr
N-Nitrosodi-n-propylamine	0.15	U	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID: H5-SS01-01	6/13/2016 9:50:00 Collected: AM			Initial-BASE/ Analysis Type: NEUTRAL				Dilution: 3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIPHENYLAMINE	0.15	UY	0.15	LOD	1.5	LOQ	mg/Kg	UJ	Surr

Sample ID: H5-SS01-02	6/13/2016 9:55:00 Collected: AM			Initial-BASE/ Analysis Type: NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.90	UQ	0.90	LOD	1.3	LOQ	mg/Kg	UJ	Lcs

Sample ID: H5-SS02-01	6/13/2016 9:15:00 Collected: AM			Initial-ACID Analysis Type: Initial-ACID				Dilution: 3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2,4,6-TRICHLOROPHENOL	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2,4-DICHLOROPHENOL	4.4	U	4.4	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	4.4	U	4.4	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2,4-DINITROPHENOL	8.9	U	8.9	LOD	44	LOQ	mg/Kg	UJ	Surr
2-CHLOROPHENOL	4.4	U	4.4	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	4.4	U	4.4	LOD	8.5	LOQ	mg/Kg	UJ	Surr
4,6-DINITRO-2-METHYLPHENOL	4.4	U	4.4	LOD	17	LOQ	mg/Kg	UJ	Surr
4-CHLORO-3-METHYLPHENOL	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	18	UY	18	LOD	44	LOQ	mg/Kg	UJ	Surr
BENZOIC ACID	18	UYZ	18	LOD	53	LOQ	mg/Kg	UJ	Surr, Fd
PENTACHLOROPHENOL	4.4	U	4.4	LOD	8.5	LOQ	mg/Kg	UJ	Surr
PHENOL	4.4	U	4.4	LOD	8.5	LOQ	mg/Kg	UJ	Surr

Sample ID: H5-SS02-01	6/13/2016 9:15:00 Collected: AM			Initial-BASE/ Analysis Type: NEUTRAL				Dilution: 3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
1,2-DICHLOROBENZENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
1,3-DICHLOROBENZENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
1,4-DICHLOROBENZENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2,4-DINITROTOLUENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: H5-SS02-01 6/13/2016 9:15:00 Initial-BASE/ Dilution: 3
 Collected: AM Analysis Type: NEUTRAL

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,6-DINITROTOLUENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2-CHLORONAPHTHALENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
2-NITROANILINE	0.89	U	0.89	LOD	17	LOQ	mg/Kg	UJ	Surr
3,3'-DICHLOROBENZIDINE	35	UQ	35	LOD	53	LOQ	mg/Kg	UJ	Lcs, Surr
3-NITROANILINE	0.89	U	0.89	LOD	17	LOQ	mg/Kg	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	4.4	U	4.4	LOD	11	LOQ	mg/Kg	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
4-NITROANILINE	4.4	U	4.4	LOD	17	LOQ	mg/Kg	UJ	Surr
BENZYL ALCOHOL	0.89	U	0.89	LOD	35	LOQ	mg/Kg	UJ	Surr
bis(2-chloroethoxy) methane	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.89	UYZ	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
Butyl benzyl phthalate	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
CARBAZOLE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
DIBENZOFURAN	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
DIETHYL PHTHALATE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
DIMETHYL PHTHALATE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
DI-N-BUTYL PHTHALATE	1.8	U	1.8	LOD	8.5	LOQ	mg/Kg	UJ	Surr
DI-N-OCTYL PHTHALATE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBENZENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBUTADIENE	0.89	U	0.89	LOD	2.7	LOQ	mg/Kg	UJ	Surr
HEXACHLOROETHANE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
ISOPHORONE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
NITROBENZENE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
N-NITROSODIMETHYLAMINE	0.89	UY	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
N-Nitrosodi-n-propylamine	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr
N-NITROSODIPHENYLAMINE	0.89	U	0.89	LOD	8.5	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: H5-SS02-01 DUP	Collected: 6/13/2016 9:15:00 AM	Analysis Type: Initial-ACID	Dilution: 3						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	3.5	JYZ	3.6	LOD	11	LOQ	mg/Kg	J	RI, Fd

Sample ID: H5-SS02-01 DUP	Collected: 6/13/2016 9:15:00 AM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 3						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
1,2-DICHLOROBENZENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
1,3-DICHLOROBENZENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
1,4-DICHLOROBENZENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
2,4-DINITROTOLUENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
2,6-DINITROTOLUENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
2-CHLORONAPHTHALENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
2-NITROANILINE	0.18	U	0.18	LOD	3.4	LOQ	mg/Kg	UJ	Surr
3,3'-DICHLOROBENZIDINE	7.2	UQ	7.2	LOD	11	LOQ	mg/Kg	UJ	Lcs, Surr
3-NITROANILINE	0.18	U	0.18	LOD	3.4	LOQ	mg/Kg	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.89	U	0.89	LOD	2.1	LOQ	mg/Kg	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
4-NITROANILINE	0.89	U	0.89	LOD	3.4	LOQ	mg/Kg	UJ	Surr
BENZYL ALCOHOL	0.18	U	0.18	LOD	7.1	LOQ	mg/Kg	UJ	Surr
bis(2-chloroethoxy) methane	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.36	U	0.36	LOD	1.7	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.18	UYZ	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.36	U	0.36	LOD	1.7	LOQ	mg/Kg	UJ	Surr
Butyl benzyl phthalate	0.36	U	0.36	LOD	1.7	LOQ	mg/Kg	UJ	Surr
CARBAZOLE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
DIBENZOFURAN	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
DIETHYL PHTHALATE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
DIMETHYL PHTHALATE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
DI-N-BUTYL PHTHALATE	0.36	U	0.36	LOD	1.7	LOQ	mg/Kg	UJ	Surr
DI-N-OCTYL PHTHALATE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBENZENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBUTADIENE	0.18	U	0.18	LOD	0.54	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID: H5-SS02-01 DUP		Collected: 6/13/2016 9:15:00 AM		Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 3		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXACHLOROETHANE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
ISOPHORONE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
NITROBENZENE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
N-NITROSODIMETHYLAMINE	0.18	UY	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
N-Nitrosodi-n-propylamine	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr
N-NITROSODIPHENYLAMINE	0.18	U	0.18	LOD	1.7	LOQ	mg/Kg	UJ	Surr

Sample ID: H5-SS02-02		Collected: 6/13/2016 9:20:00 AM		Analysis Type: Initial-ACID			Dilution: 3		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2,4,6-TRICHLOROPHENOL	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2,4-DICHLOROPHENOL	0.38	U	0.38	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	0.38	U	0.38	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2,4-DINITROPHENOL	0.76	U	0.76	LOD	3.8	LOQ	mg/Kg	UJ	Surr
2-CHLOROPHENOL	0.38	U	0.38	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	0.38	U	0.38	LOD	0.73	LOQ	mg/Kg	UJ	Surr
4,6-DINITRO-2-METHYLPHENOL	0.38	U	0.38	LOD	1.5	LOQ	mg/Kg	UJ	Surr
4-CHLORO-3-METHYLPHENOL	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	1.5	UY	1.5	LOD	3.8	LOQ	mg/Kg	UJ	Surr
BENZOIC ACID	1.5	UYZ	1.5	LOD	4.6	LOQ	mg/Kg	UJ	Surr
PENTACHLOROPHENOL	0.38	U	0.38	LOD	0.73	LOQ	mg/Kg	UJ	Surr
PHENOL	0.38	U	0.38	LOD	0.73	LOQ	mg/Kg	UJ	Surr

Sample ID: H5-SS02-02		Collected: 6/13/2016 9:20:00 AM		Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 3		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
1,2-DICHLOROBENZENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
1,3-DICHLOROBENZENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
1,4-DICHLOROBENZENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2,4-DINITROTOLUENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID: H5-SS02-02 6/13/2016 9:20:00 Initial-BASE/ Dilution: 3
 Collected: AM Analysis Type: NEUTRAL

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,6-DINITROTOLUENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2-CHLORONAPHTHALENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
2-NITROANILINE	0.076	U	0.076	LOD	1.5	LOQ	mg/Kg	UJ	Surr
3,3'-DICHLOROBENZIDINE	3.0	UQ	3.0	LOD	4.6	LOQ	mg/Kg	UJ	Lcs, Surr
3-NITROANILINE	0.076	U	0.076	LOD	1.5	LOQ	mg/Kg	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.38	U	0.38	LOD	0.91	LOQ	mg/Kg	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
4-NITROANILINE	0.38	U	0.38	LOD	1.5	LOQ	mg/Kg	UJ	Surr
BENZYL ALCOHOL	0.076	U	0.076	LOD	3.0	LOQ	mg/Kg	UJ	Surr
bis(2-chloroethoxy) methane	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.076	UYZ	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
Butyl benzyl phthalate	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
CARBAZOLE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
DIBENZOFURAN	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
DIETHYL PHTHALATE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
DIMETHYL PHTHALATE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
DI-N-BUTYL PHTHALATE	0.15	U	0.15	LOD	0.73	LOQ	mg/Kg	UJ	Surr
DI-N-OCTYL PHTHALATE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
HEXACHLOROENZENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBUTADIENE	0.076	U	0.076	LOD	0.23	LOQ	mg/Kg	UJ	Surr
HEXACHLOROETHANE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
ISOPHORONE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
NITROBENZENE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
N-NITROSODIMETHYLAMINE	0.076	UY	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
N-Nitrosodi-n-propylamine	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr
N-NITROSODIPHENYLAMINE	0.076	U	0.076	LOD	0.73	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: WDS-SB08-05	Collected: 6/13/2016 1:20:00 PM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.87	UQ	0.87	LOD	1.3	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB09-06	Collected: 6/13/2016 1:05:00 PM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.76	UQ	0.76	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.028	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI
DIBENZOFURAN	0.027	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB11-08	Collected: 6/13/2016 10:40:00 AM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB12-05	Collected: 6/13/2016 8:35:00 AM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB13-05	Collected: 6/13/2016 8:20:00 AM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.74	UQ	0.74	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
EtoA	Extraction to Analysis Estimation
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606512

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606512
EDD Filename: EDD_1606512_SEDD_2a_v5_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D SIM Preparation Method: 3550B
Matrix: Soil

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB08-05 (Dilution-1)	Extraction To Analysis	43.00	40.00	DAYS	J- (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40326	7/5/2016 12:02:36 PM	POTASSIUM	8.6 mg/Kg	H5-SS01-01 H5-SS01-02 H5-SS02-01 H5-SS02-01 DUP H5-SS02-02 WDS-SB08-05 WDS-SB09-06 WDS-SB11-08 WDS-SB13-05

Surrogate Outlier Report

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H5-SS01-01 (Initial)	DECACHLOROBIPHENYL	16.6	60.00-125.00	All Target Analytes	J- (all detects) UJ (all non-detects)
	TETRACHLORO-M-XYLENE	16.4	44.00-130.00		
H5-SS02-01 DUP (Initial)	DECACHLOROBIPHENYL	28.6	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	TETRACHLORO-M-XYLENE	24.4	44.00-130.00		
H5-SS02-01 (Initial)	DECACHLOROBIPHENYL	54	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)
H5-SS03-01 (Initial)	DECACHLOROBIPHENYL	20.6	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	TETRACHLORO-M-XYLENE	18.5	44.00-130.00		
H5-SS03-02 (Initial)	DECACHLOROBIPHENYL	31.3	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	TETRACHLORO-M-XYLENE	29.5	44.00-130.00		
H5-SS04-02 (Initial)	DECACHLOROBIPHENYL	45.4	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	TETRACHLORO-M-XYLENE	42.5	44.00-130.00		

Method: 8270D SIM
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H5-SS01-01 (Initial)	Terphenyl-d14	12.1	58.00-133.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
H5-SS02-01 DUP (Initial)	2-FLUOROBIPHENYL	0	46.00-115.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB13-05 (Initial)	Terphenyl-d14	139	58.00-133.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H5-SS01-01 (Initial)	2,4,6-TRIBROMOPHENOL	0	39.00-132.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROBIPHENYL	19	44.00-115.00		
	2-FLUOROPHENOL	0	35.00-115.00		
	Nitrobenzene-d5	18.1	37.00-122.00		
	PHENOL-D5	0	33.00-122.00		
	Terphenyl-d14	21.8	54.00-127.00		
H5-SS02-01 DUP (Initial)	2-FLUOROBIPHENYL	43.3	44.00-115.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
	Terphenyl-d14	49.1	54.00-127.00		
H5-SS02-01 (Initial)	2,4,6-TRIBROMOPHENOL	0	39.00-132.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROBIPHENYL	0	44.00-115.00		
	2-FLUOROPHENOL	0	35.00-115.00		
	Nitrobenzene-d5	0	37.00-122.00		
	PHENOL-D5	0	33.00-122.00		
H5-SS02-02 (Initial)	2-FLUOROBIPHENYL	34.6	44.00-115.00	All Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROPHENOL	32.8	35.00-115.00		
	Nitrobenzene-d5	36.1	37.00-122.00		
	PHENOL-D5	0	33.00-122.00		
	Terphenyl-d14	36.6	54.00-127.00		

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB08-05MS WDS-SB08-05MSD (WDS-SB08-05)	ACENAPHTHENE ACENAPHTHYLENE BENZ(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE DIBENZO(A,H)ANTHRACENE FLUORANTHENE FLUORENE PYRENE	168 245 859 800 1290 221 808 149 1420 189 1280	- 129 - - - - - - - - -	44.00-111.00 39.00-116.00 54.00-122.00 50.00-125.00 53.00-128.00 56.00-123.00 57.00-118.00 50.00-129.00 55.00-119.00 47.00-114.00 55.00-117.00	39.31 (25.00) 52.92 (25.00) 102.26 (25.00) 103.19 (25.00) 116.61 (25.00) (25.00) 35.55 (25.00) 104.05 (25.00) 55.37 (25.00) 105.74 (25.00) 51.34 (25.00) 104.48 (25.00)	ACENAPHTHENE ACENAPHTHYLENE BENZ(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE DIBENZO(A,H)ANTHRACENE FLUORANTHENE FLUORENE PYRENE	J (all detects)
WDS-SB08-05MS WDS-SB08-05MSD (WDS-SB08-05)	ANTHRACENE BENZO(G,H,I)PERYLENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE	117 233 246 846	-74.8 14.2 27.8 33.7	50.00-114.00 49.00-127.00 49.00-130.00 49.00-113.00	70.75 (25.00) 91.22 (25.00) (25.00) 87.55 (25.00) 118.86 (25.00)	ANTHRACENE BENZO(G,H,I)PERYLENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE	J(all detects) UJ(all non-detects)
WDS-SB08-05MS WDS-SB08-05MSD (WDS-SB08-05)	1-METHYLNAPHTHALENE	142	131	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40223 (H5-SS01-01 H5-SS01-02 H5-SS02-01 H5-SS02-01 DUP H5-SS02-02 WDS-SB08-05 WDS-SB09-06 WDS-SB11-08 WDS-SB12-05 WDS-SB13-05)	3,3'-DICHLOROBENZIDINE	0	-	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J- (all detects) UJ (all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H5-SS02-01 (Dry)	H5-SS02-01 DUP (Dry)			
ANTIMONY	1.1	23	182	50.00	J (all detects) UJ (all non-detects)
BERYLLIUM	0.43	20	192	50.00	
CADMIUM	0.53	20	190	50.00	
CHROMIUM	5.0	26	135	50.00	
COBALT	0.90	23	185	50.00	
COPPER	18	41	78	50.00	
MAGNESIUM	230	460	67	50.00	
MANGANESE	20	40	67	50.00	
NICKEL	4.3	28	147	50.00	
POTASSIUM	260	490	61	50.00	
SELENIUM	4.9 U	4.8	200	50.00	
SILVER	0.23	9.5	191	50.00	
SODIUM	220	500	78	50.00	
VANADIUM	9.5	26	93	50.00	
ZINC	50	150	100	50.00	

Method: 8270D SIM
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H5-SS02-01	H5-SS02-01 DUP			
1-METHYLNAPHTHALENE	0.0043	0.036 U	200	50.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	0.0041	0.036 U	200	50.00	
ACENAPHTHENE	0.0030	0.036 U	200	50.00	
ACENAPHTHYLENE	0.0070	0.036 U	200	50.00	
ANTHRACENE	0.0098	0.036 U	200	50.00	
BENZO(G,H,I)PERYLENE	0.018	0.036 U	200	50.00	
BENZO(K)FLUORANTHENE	0.019	0.036 UY	200	50.00	
DIBENZO(A,H)ANTHRACENE	0.0028	0.036 U	200	50.00	
FLUORENE	0.0052	0.036 U	200	50.00	
INDENO(1,2,3-CD)PYRENE	0.015	0.036 U	200	50.00	
PHENANTHRENE	0.0066	0.059	160	50.00	

Method: 8270D-MOD
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H5-SS02-01	H5-SS02-01 DUP			
BENZOIC ACID	53 UYZ	3.5	200	50.00	J(all detects) UJ(all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H5-SS01-01	ANTIMONY	J	1.5	2.1	LOQ	mg/Kg	J (all detects)
	ARSENIC	J	2.6	4.1	LOQ	mg/Kg	
	COBALT	J	1.4	2.1	LOQ	mg/Kg	
	NICKEL	J	4.4	10	LOQ	mg/Kg	
	SILVER	J	0.58	2.1	LOQ	mg/Kg	
H5-SS01-02	CADMIUM	J	0.074	0.23	LOQ	mg/Kg	J (all detects)
	COBALT	J	0.90	0.91	LOQ	mg/Kg	
	NICKEL	J	3.9	4.5	LOQ	mg/Kg	
H5-SS02-01	ANTIMONY	J	1.1	2.5	LOQ	mg/Kg	J (all detects)
	ARSENIC	J	2.7	4.9	LOQ	mg/Kg	
	BERYLLIUM	J	0.43	0.62	LOQ	mg/Kg	
	CADMIUM	J	0.53	0.62	LOQ	mg/Kg	
	COBALT	J	0.90	2.5	LOQ	mg/Kg	
	NICKEL	J	4.3	12	LOQ	mg/Kg	
SILVER	J	0.23	2.5	LOQ	mg/Kg		
H5-SS02-01 DUP	ARSENIC	J	4.2	4.7	LOQ	mg/Kg	J (all detects)
H5-SS02-02	ARSENIC	J	0.77	2.0	LOQ	mg/Kg	J (all detects)
	LEAD	J	4.3	5.1	LOQ	mg/Kg	
	NICKEL	J	3.0	5.1	LOQ	mg/Kg	
	SILVER	J	0.67	1.0	LOQ	mg/Kg	
WDS-SB08-05	BERYLLIUM	J	0.080	0.22	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.071	0.22	LOQ	mg/Kg	
	NICKEL	J	4.0	4.3	LOQ	mg/Kg	
WDS-SB09-06	ARSENIC	J	0.69	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.15	0.18	LOQ	mg/Kg	
	LEAD	J	2.9	3.7	LOQ	mg/Kg	
WDS-SB11-08	BERYLLIUM	J	0.071	0.18	LOQ	mg/Kg	J (all detects)
WDS-SB12-05	CADMIUM	J	0.033	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.8	3.6	LOQ	mg/Kg	
WDS-SB13-05	ARSENIC	J	1.4	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.15	0.18	LOQ	mg/Kg	
	CADMIUM	J	0.049	0.18	LOQ	mg/Kg	

Method: 6010C-STAR
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H5-SS04-01	LEAD	J	7.7	21	LOQ	mg/Kg	J (all detects)
H5-SS04-02	LEAD	J	5.0	7.5	LOQ	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606512

Laboratory: RTILABS

EDD Filename: EDD_1606512_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H5-SS01-02	THALLIUM	J	0.078	0.18	LOQ	mg/Kg	J (all detects)
H5-SS02-02	THALLIUM	J	0.068	0.21	LOQ	mg/Kg	J (all detects)
WDS-SB08-05	THALLIUM	JG	0.10	0.17	LOQ	mg/Kg	J (all detects)
WDS-SB09-06	THALLIUM	J	0.091	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB11-08	THALLIUM	JG	0.10	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB12-05	THALLIUM	J	0.076	0.14	LOQ	mg/Kg	J (all detects)
WDS-SB13-05	THALLIUM	J	0.073	0.15	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H5-SS02-01 DUP	BENZOIC ACID	JYZ	3.5	11	LOQ	mg/Kg	J (all detects)
WDS-SB09-06	CARBAZOLE	J	0.028	0.18	LOQ	mg/Kg	J (all detects)
	DIBENZOFURAN	J	0.027	0.18	LOQ	mg/Kg	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606524		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	17 soil samples for a project-specific list of PAHs, SVOCs STAR, PCBs, energetics, metals		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 30 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606524. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or during manual data review of ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C			Matrix: Soil						

Sample ID: H14-SB01-07		Collected: 6/13/2016 3:10:00 PM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	210		1.8	LOD	7.1	LOQ	mg/Kg	J	Fd

Sample ID: H14-SB01-07		Collected: 6/13/2016 3:10:00 PM			Analysis Type: Dilution-2			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8200		140	LOD	350	LOQ	mg/Kg	J	Fd

Sample ID: H14-SB01-07		Collected: 6/13/2016 3:10:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	35		3.5	LOD	7.1	LOQ	mg/Kg	J	Fd
BERYLLIUM	0.092	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.042	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI, Fd
CALCIUM	320		7.1	LOD	35	LOQ	mg/Kg	J	Fd
LEAD	2.5	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI
MAGNESIUM	1600		3.5	LOD	35	LOQ	mg/Kg	J	Fd
NICKEL	5.4		0.71	LOD	3.5	LOQ	mg/Kg	J	Fd
POTASSIUM	1200		7.1	LOD	14	LOQ	mg/Kg	J	Fd
VANADIUM	16		0.71	LOD	1.8	LOQ	mg/Kg	J	Fd
ZINC	13		0.35	LOD	3.5	LOQ	mg/Kg	J	Fd

Sample ID: H14-SB01-07 DUP		Collected: 6/13/2016 3:10:00 PM			Analysis Type: Dilution-1			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	3000		140	LOD	340	LOQ	mg/Kg	J	Fd

Sample ID: H14-SB01-07 DUP		Collected: 6/13/2016 3:10:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	20		3.4	LOD	6.8	LOQ	mg/Kg	J	Fd
BERYLLIUM	0.071	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI
CADMIUM	0.034	U	0.034	LOD	0.17	LOQ	mg/Kg	UJ	Fd
CALCIUM	190		6.8	LOD	34	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID:H14-SB01-07 DUP		6/13/2016 3:10:00		Collected: PM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
LEAD	1.5	J	0.68	LOD	3.4	LOQ	mg/Kg	J	RI		
MAGNESIUM	730		3.4	LOD	34	LOQ	mg/Kg	J	Fd		
MANGANESE	83		0.17	LOD	0.68	LOQ	mg/Kg	J	Fd		
NICKEL	2.2	J	0.68	LOD	3.4	LOQ	mg/Kg	J	RI, Fd		
POTASSIUM	520		6.8	LOD	14	LOQ	mg/Kg	J	Fd		
VANADIUM	7.7		0.68	LOD	1.7	LOQ	mg/Kg	J	Fd		
ZINC	6.3		0.34	LOD	3.4	LOQ	mg/Kg	J	Fd		

Sample ID:H14-SB02-25		6/13/2016 3:55:00		Collected: PM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.11	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI		
LEAD	2.4	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI		

Sample ID:H14-SB03-06		6/13/2016 3:35:00		Collected: PM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.043	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI		
LEAD	2.3	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI		

Sample ID:H14-SS01-01		6/13/2016 2:50:00		Collected: PM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
CADMIUM	0.065	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI		
LEAD	3.3	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI		

Sample ID:H14-SS02-01		6/13/2016 2:10:00		Collected: PM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.052	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI		
CADMIUM	0.052	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI		

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: H14-SS03-01		Collected: 6/13/2016 3:25:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.10	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI
CADMIUM	0.038	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI
LEAD	2.1	J	0.83	LOD	4.2	LOQ	mg/Kg	J	RI

Sample ID: H16-SB01-05		Collected: 6/13/2016 10:55:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.3	J	0.80	LOD	1.6	LOQ	mg/Kg	J	RI, Fd
BARIUM	23		4.0	LOD	8.0	LOQ	mg/Kg	J	Fd
BERYLLIUM	0.12	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.066	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI, Fd
CALCIUM	830		8.0	LOD	40	LOQ	mg/Kg	J	Fd
COPPER	16		0.80	LOD	4.0	LOQ	mg/Kg	J	Fd
LEAD	5.0		0.80	LOD	4.0	LOQ	mg/Kg	J	Fd
NICKEL	7.0		0.80	LOD	4.0	LOQ	mg/Kg	J	Fd
SODIUM	110		4.0	LOD	40	LOQ	mg/Kg	J	Fd
ZINC	18		0.40	LOD	4.0	LOQ	mg/Kg	J	Fd

Sample ID: H16-SB01-05 DUP		Collected: 6/13/2016 10:55:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	2.9	J	2.3	LOD	4.7	LOQ	mg/Kg	J	RI, Fd
BARIUM	89		12	LOD	23	LOQ	mg/Kg	J	Fd
BERYLLIUM	0.57	J	0.12	LOD	0.58	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.59		0.12	LOD	0.58	LOQ	mg/Kg	J	Fd
CALCIUM	4200		23	LOD	120	LOQ	mg/Kg	J	Fd
COPPER	30		2.3	LOD	12	LOQ	mg/Kg	J	Fd
LEAD	22		2.3	LOD	12	LOQ	mg/Kg	J	Fd
NICKEL	12	J	2.3	LOD	12	LOQ	mg/Kg	J	Fd
SODIUM	460		12	LOD	120	LOQ	mg/Kg	J	Fd
ZINC	86		1.2	LOD	12	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID: H16-SS01-01		Collected: 6/13/2016 10:50:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.13	J	0.044	LOD	0.22	LOQ	mg/Kg	J	RI

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: H14-SB01-07		Collected: 6/13/2016 3:10:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.14	J	0.036	LOD	0.14	LOQ	mg/Kg	J	Fd

Sample ID: H14-SB01-07 DUP		Collected: 6/13/2016 3:10:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.077	J	0.032	LOD	0.13	LOQ	mg/Kg	J	RI, Fd

Sample ID: H14-SB02-25		Collected: 6/13/2016 3:55:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.13	J	0.036	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H14-SS02-01		Collected: 6/13/2016 2:10:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.13	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H16-SB01-05		Collected: 6/13/2016 10:55:00 AM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.075	J	0.040	LOD	0.16	LOQ	mg/Kg	J	RI, Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID: H16-SB01-05 DUP	Collected: 6/13/2016 10:55:00 AM			Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.12	UG	0.12	LOD	0.49	LOQ	mg/Kg	UJ	Fd

Sample ID: H16-SS01-01	Collected: 6/13/2016 10:50:00 AM			Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.13	JG	0.044	LOD	0.18	LOQ	mg/Kg	J	RI

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Soil						

Sample ID: H14-SB01-07	Collected: 6/13/2016 3:10:00 PM			Analysis Type: Initial-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.00079		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.00073		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.0016		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
CHRYSENE	0.00090		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.0018		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.0011		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
PYRENE	0.0015		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd

Sample ID: H14-SB01-07 DUP	Collected: 6/13/2016 3:10:00 PM			Analysis Type: Initial-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd
BENZO(A)PYRENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd
BENZO(B)FLUORANTHENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd
CHRYSENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd
FLUORANTHENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd
PHENANTHRENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd
PYRENE	0.00068	U	0.00068	LOD	0.00068	LOQ	mg/Kg	UJ	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID:H14-SB03-06		6/13/2016 3:35:00			Initial-BASE/			Dilution: 1	
		Collected: PM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.0013		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr
BENZO(A)PYRENE	0.00094		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr
BENZO(B)FLUORANTHENE	0.0020		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr
CHRYSENE	0.0012		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	0.0033		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.0026		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr
PYRENE	0.0025		0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Surr

Sample ID:H16-SB01-05		6/13/2016 10:55:00			Initial-BASE/			Dilution: 1	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.0011		0.00083	LOD	0.00083	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.0015		0.00083	LOD	0.00083	LOQ	mg/Kg	J	Fd
NAPHTHALENE	0.0013		0.00083	LOD	0.00083	LOQ	mg/Kg	J	Fd

Sample ID:H16-SB01-05 DUP		6/13/2016 10:55:00			Initial-BASE/			Dilution: 1	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.0027		0.0024	LOD	0.0024	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.0024	U	0.0024	LOD	0.0024	LOQ	mg/Kg	UJ	Fd
NAPHTHALENE	0.0034		0.0024	LOD	0.0024	LOQ	mg/Kg	J	Fd

Sample ID:H16-SS01-01		6/13/2016 10:50:00			Dilution-2-BASE/			Dilution: 2000	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	12		1.8	LOD	1.8	LOQ	mg/Kg	J-	EtoA
FLUORANTHENE	18		1.8	LOD	1.8	LOQ	mg/Kg	J-	EtoA
PYRENE	15		1.8	LOD	1.8	LOQ	mg/Kg	J-	EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Soil						

Sample ID: H16-SB01-05		Collected: 6/13/2016 10:55:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.25	J	0.41	LOD	1.2	LOQ	mg/Kg	J	RI, Lcs, Fd

Sample ID: H16-SB01-05 DUP		Collected: 6/13/2016 10:55:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.60	J	1.2	LOD	3.6	LOQ	mg/Kg	J	RI, Lcs, Fd

Sample ID: H16-SS01-01		Collected: 6/13/2016 10:50:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Methylphenol (o-Cresol)	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
3/4-Methylphenol [m/p-Cresol]	1.1	U	1.1	LOD	4.2	LOQ	mg/Kg	UJ	EtoA
4-Chloroaniline [p-Chloroaniline]	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	EtoA

Sample ID: H16-SS01-01		Collected: 6/13/2016 10:50:00 AM			Analysis Type: Initial-ACID			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
2,4,6-TRICHLOROPHENOL	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
2,4-DICHLOROPHENOL	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
2,4-Dimethyl phenol	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
2,4-DINITROPHENOL	2.2	U	2.2	LOD	11	LOQ	mg/Kg	UJ	Surr, EtoA
2-CHLOROPHENOL	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
2-NITROPHENOL	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
4,6-DINITRO-2-METHYLPHENOL	1.1	U	1.1	LOD	4.2	LOQ	mg/Kg	UJ	Surr, EtoA
4-CHLORO-3-METHYLPHENOL	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
4-NITROPHENOL	4.4	U	4.4	LOD	11	LOQ	mg/Kg	UJ	Surr, EtoA
BENZOIC ACID	4.4	UY	4.4	LOD	13	LOQ	mg/Kg	UJ	Lcs, Surr, EtoA
PENTACHLOROPHENOL	1.1	UY	1.1	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA
PHENOL	1.1	U	1.1	LOD	2.1	LOQ	mg/Kg	UJ	Surr, EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

9/11/2016 11:31:12 AM

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID:H16-SS01-01	6/13/2016 10:50:00		Initial-BASE/		Analysis Type: NEUTRAL		Dilution: 10		
	Collected: AM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
1,2-DICHLOROBENZENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
1,3-DICHLOROBENZENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
1,4-DICHLOROBENZENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
2,4-DINITROTOLUENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
2,6-DINITROTOLUENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
2-CHLORONAPHTHALENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
2-NITROANILINE	0.22	U	0.22	LOD	4.2	LOQ	mg/Kg	UJ	EtoA
3,3'-DICHLOROBENZIDINE	8.8	U	8.8	LOD	13	LOQ	mg/Kg	UJ	EtoA
3-NITROANILINE	0.22	U	0.22	LOD	4.2	LOQ	mg/Kg	UJ	EtoA
4-BROMOPHENYL PHENYL ETHER	1.1	U	1.1	LOD	2.7	LOQ	mg/Kg	UJ	EtoA
4-CHLOROPHENYL PHENYL ETHER	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
4-NITROANILINE	1.1	U	1.1	LOD	4.2	LOQ	mg/Kg	UJ	EtoA
BENZYL ALCOHOL	0.22	U	0.22	LOD	8.7	LOQ	mg/Kg	UJ	EtoA
bis(2-chloroethoxy) methane	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
BIS(2-CHLOROETHYL) ETHER	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
BIS(2-CHLOROISOPROPYL)ETHER	0.22	UYZ	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
BIS(2-ETHYLHEXYL) PHTHALATE	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
Butyl benzyl phthalate	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
CARBAZOLE	0.89	J	0.22	LOD	2.1	LOQ	mg/Kg	J	RI, EtoA
DIBENZOFURAN	0.16	J	0.22	LOD	2.1	LOQ	mg/Kg	J	RI, EtoA
DIETHYL PHTHALATE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
DIMETHYL PHTHALATE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
DI-N-BUTYL PHTHALATE	0.44	U	0.44	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
DI-N-OCTYL PHTHALATE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
HEXACHLOROBENZENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
HEXACHLOROBUTADIENE	0.22	U	0.22	LOD	0.66	LOQ	mg/Kg	UJ	EtoA
HEXACHLOROETHANE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
ISOPHORONE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
NITROBENZENE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
N-NITROSODIMETHYLAMINE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA
N-Nitrosodi-n-propylamine	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: H16-SS01-01	Collected: 6/13/2016 10:50:00 AM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIPHENYLAMINE	0.22	U	0.22	LOD	2.1	LOQ	mg/Kg	UJ	EtoA

Sample ID: MP-SB02-11	Collected: 6/13/2016 11:30:00 AM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.71	UQ	0.71	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: MP-SB03-09	Collected: 6/13/2016 11:30:00 AM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.36	U	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: MP-SS02-01	Collected: 6/13/2016 9:25:00 AM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.71	UQ	0.71	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.058	J	0.018	LOD	0.17	LOQ	mg/Kg	J	RI, Fd
DIBENZOFURAN	0.030	J	0.018	LOD	0.17	LOQ	mg/Kg	J	RI, Fd

Sample ID: MP-SS02-01 DUP	Collected: 6/13/2016 9:25:00 AM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.70	UQ	0.70	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.018	U	0.018	LOD	0.17	LOQ	mg/Kg	UJ	Fd
DIBENZOFURAN	0.018	U	0.018	LOD	0.17	LOQ	mg/Kg	UJ	Fd

Sample ID: MP-SS03-01	Collected: 6/13/2016 11:15:00 AM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.00072		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
ACENAPHTHYLENE	0.00071	U	0.00071	LOD	0.00071	LOQ	mg/Kg	UJ	Surr
ANTHRACENE	0.0023		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
BENZ(A)ANTHRACENE	0.0072		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
BENZO(A)PYRENE	0.0054		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
BENZO(B)FLUORANTHENE	0.0089		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
BENZO(G,H,I)PERYLENE	0.00071	U	0.00071	LOD	0.00071	LOQ	mg/Kg	UJ	Surr
BENZO(K)FLUORANTHENE	0.0042		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
CHRYSENE	0.0053		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.00071	U	0.00071	LOD	0.00071	LOQ	mg/Kg	UJ	Surr
FLUORANTHENE	0.014		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
FLUORENE	0.00077		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
INDENO(1,2,3-CD)PYRENE	0.0017		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
PHENANTHRENE	0.0082		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr
PYRENE	0.013		0.00071	LOD	0.00071	LOQ	mg/Kg	J-	Surr

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
ACENAPHTHYLENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
ANTHRACENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
BENZ(A)ANTHRACENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
BENZO(A)PYRENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
BENZO(B)FLUORANTHENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
BENZO(G,H,I)PERYLENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
BENZO(K)FLUORANTHENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
CHRYSENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
DIBENZO(A,H)ANTHRACENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
FLUORANTHENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
FLUORENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
INDENO(1,2,3-CD)PYRENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID: MP-SB03-09		Collected: 6/13/2016 11:30:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA
PYRENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	EtoA

Sample ID: MP-SS02-01		Collected: 6/13/2016 9:25:00 AM			Analysis Type: Dilution-1-BASE/ NEUTRAL			Dilution: 40	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.055		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.16		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.32		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.24		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.34		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.093		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.14		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
CHRYSENE	0.26		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.76		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
FLUORENE	0.062		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.12		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.51		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd
PYRENE	0.57		0.028	LOD	0.028	LOQ	mg/Kg	J	Fd

Sample ID: MP-SS02-01		Collected: 6/13/2016 9:25:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	0.0029		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd

Sample ID: MP-SS02-01 DUP		Collected: 6/13/2016 9:25:00 AM			Analysis Type: Dilution-1-BASE/ NEUTRAL			Dilution: 3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.046		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.032		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.054		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd
CHRYSENE	0.033		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID:MP-SS02-01 DUP		6/13/2016 9:25:00		Dilution-1-BASE/				Dilution: 3	
		Collected: AM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	0.099		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.058		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd
PYRENE	0.074		0.0021	LOD	0.0021	LOQ	mg/Kg	J	Fd

Sample ID:MP-SS02-01 DUP		6/13/2016 9:25:00		Initial-BASE/				Dilution: 1	
		Collected: AM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.0071		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
ACENAPHTHYLENE	0.00071	U	0.00071	LOD	0.00071	LOQ	mg/Kg	UJ	Fd
ANTHRACENE	0.018		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.022		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.021		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
FLUORENE	0.0072		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.022		0.00071	LOD	0.00071	LOQ	mg/Kg	J	Fd

Sample ID:MP-SS03-01		6/13/2016 11:15:00		Initial-BASE/				Dilution: 3	
		Collected: AM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.0037		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
ACENAPHTHYLENE	0.0022	U	0.0022	LOD	0.0022	LOQ	mg/Kg	UJ	EtoA
ANTHRACENE	0.0055		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
BENZ(A)ANTHRACENE	0.025		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
BENZO(A)PYRENE	0.020		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
BENZO(B)FLUORANTHENE	0.026		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
BENZO(G,H,I)PERYLENE	0.0022		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
BENZO(K)FLUORANTHENE	0.014		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
CHRYSENE	0.021		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
DIBENZO(A,H)ANTHRACENE	0.0022	U	0.0022	LOD	0.0022	LOQ	mg/Kg	UJ	EtoA
FLUORANTHENE	0.055		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
FLUORENE	0.0033		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA
INDENO(1,2,3-CD)PYRENE	0.0022	U	0.0022	LOD	0.0022	LOQ	mg/Kg	UJ	EtoA
PHENANTHRENE	0.033		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID: MP-SS03-01
Collected: 6/13/2016 11:15:00 AM
Analysis Type: Initial-BASE/ NEUTRAL
Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	0.044		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	EtoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
EtoA	Extraction to Analysis Estimation
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Upper Estimation
Rl	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606524

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606524
 EDD Filename: EDD_1606524_SEDD_2a_v28_rev

Laboratory: RTILABS
 eQAPP Name: Former_Camp_Hero

Method: 8270D SIM	Preparation Method: 3550B
Matrix: Soil	

Sample ID	Type	Actual	Criteria	Units	Flag
H16-SS01-01 (Dilution-2)	Extraction To Analysis	41.00	40.00	DAYS	J- (all detects) UJ (all non-detects)

Method: 8270D-MOD	Preparation Method: 3550B
Matrix: Soil	

Sample ID	Type	Actual	Criteria	Units	Flag
H16-SS01-01 (Initial)	Extraction To Analysis	42.00	40.00	DAYS	J-(all detects) UJ(all non-detects)

Method: 8270D-SIM-STAR	Preparation Method: 3550B
Matrix: Soil	

Sample ID	Type	Actual	Criteria	Units	Flag
MP-SB03-09 (Initial)	Extraction To Analysis	41.00	40.00	DAYS	J-(all detects)
MP-SS03-01 (Initial)		41.00	40.00	DAYS	UJ(all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40326	7/5/2016 12:02:36 PM	POTASSIUM	8.6 mg/Kg	H14-SS01-01 H16-SB01-05 H16-SB01-05 DUP H16-SS01-01

Surrogate Outlier Report

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H14-SB03-06 (Initial)	Nitrobenzene-d5	127	44.00-125.00	All Base/Neutral Target Analytes	J+ (all detects)

Method: 8270D-MOD
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H16-SS01-01 (Initial)	2-FLUOROPHENOL PHENOL-D5	0 0	35.00-115.00 33.00-122.00	All Acid Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D-SIM-STAR
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
MP-SB02-11 (Initial)	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	34.3 35.8 45.6	46.00-115.00 44.00-125.00 58.00-133.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 8330B

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
EFO-SS01-01MS (EFO-SS01-01)	2,6-DINITROTOLUENE	121	-	79.00-117.00	-	2,6-DINITROTOLUENE	J+ (all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCS-40223 (MP-SB02-11 MP-SS02-01 MP-SS02-01 DUP MP-SS03-01)	3,3'-DICHLOROBENZIDINE	0	-	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J- (all detects) UJ (all non-detects)
LCS-40226 (H16-SB01-05 H16-SB01-05 DUP H16-SS01-01 MP-SB03-09)	BENZOIC ACID	19.7	-	40.00-117.00	-	BENZOIC ACID	J-(all detects) UJ(all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H14-SB01-07 (Dry)	H14-SB01-07 DUP (Dry)			
ALUMINUM	8200	3000	93	50.00	J (all detects) UJ (all non-detects)
BARIUM	35	20	55	50.00	
CADMIUM	0.042	0.17 U	200	50.00	
CALCIUM	320	190	51	50.00	
MAGNESIUM	1600	730	75	50.00	
MANGANESE	210	83	87	50.00	
NICKEL	5.4	2.2	84	50.00	
POTASSIUM	1200	520	79	50.00	
VANADIUM	16	7.7	70	50.00	
ZINC	13	6.3	69	50.00	

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H16-SB01-05 (Dry)	H16-SB01-05 DUP (Dry)			
ARSENIC	1.3	2.9	76	50.00	J(all detects) UJ(all non-detects)
BARIUM	23	89	118	50.00	
BERYLLIUM	0.12	0.57	130	50.00	
CADMIUM	0.066	0.59	160	50.00	
CALCIUM	830	4200	134	50.00	
COPPER	16	30	61	50.00	
LEAD	5.0	22	126	50.00	
NICKEL	7.0	12	53	50.00	
SODIUM	110	460	123	50.00	
ZINC	18	86	131	50.00	

Method: 6020A-TL
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H14-SB01-07 (Dry)	H14-SB01-07 DUP (Dry)			
THALLIUM	0.14	0.077	58	50.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H16-SB01-05 (Dry)	H16-SB01-05 DUP (Dry)			
THALLIUM	0.075	0.49 UG	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H14-SB01-07	H14-SB01-07 DUP			
BENZ(A)ANTHRACENE	0.00079	0.00068 U	200	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	0.00073	0.00068 U	200	50.00	
BENZO(B)FLUORANTHENE	0.0016	0.00068 U	200	50.00	
CHRYSENE	0.00090	0.00068 U	200	50.00	
FLUORANTHENE	0.0018	0.00068 U	200	50.00	
PHENANTHRENE	0.0011	0.00068 U	200	50.00	
PYRENE	0.0015	0.00068 U	200	50.00	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H16-SB01-05	H16-SB01-05 DUP			
2-METHYLNAPHTHALENE	0.0011	0.0027	84	50.00	J(all detects) UJ(all non-detects)
ANTHRACENE	0.0015	0.0024 U	200	50.00	
NAPHTHALENE	0.0013	0.0034	89	50.00	

Method: 8270D-MOD
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	MP-SS02-01	MP-SS02-01 DUP			
CARBAZOLE	0.058	0.17 U	200	50.00	J(all detects) UJ(all non-detects)
DIBENZOFURAN	0.030	0.17 U	200	50.00	

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H16-SB01-05	H16-SB01-05 DUP			
BENZOIC ACID	0.25	0.60	82	50.00	J(all detects) UJ(all non-detects)

Method: 8270D-SIM-STAR
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	MP-SS02-01	MP-SS02-01 DUP			
ACENAPHTHENE	0.055	0.0071	154	50.00	J(all detects) UJ(all non-detects)
ACENAPHTHYLENE	0.0029	0.00071 U	200	50.00	
ANTHRACENE	0.16	0.018	160	50.00	
BENZ(A)ANTHRACENE	0.32	0.046	150	50.00	
BENZO(A)PYRENE	0.24	0.032	153	50.00	
BENZO(B)FLUORANTHENE	0.34	0.054	145	50.00	
BENZO(G,H,I)PERYLENE	0.093	0.022	123	50.00	
BENZO(K)FLUORANTHENE	0.14	0.021	148	50.00	
CHRYSENE	0.26	0.033	155	50.00	
FLUORANTHENE	0.76	0.099	154	50.00	
FLUORENE	0.062	0.0072	158	50.00	
INDENO(1,2,3-CD)PYRENE	0.12	0.022	138	50.00	
PHENANTHRENE	0.51	0.058	159	50.00	
PYRENE	0.57	0.074	154	50.00	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H14-SB01-07	BERYLLIUM	J	0.092	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.042	0.18	LOQ	mg/Kg	
	LEAD	J	2.5	3.5	LOQ	mg/Kg	
H14-SB01-07 DUP	BERYLLIUM	J	0.071	0.17	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.5	3.4	LOQ	mg/Kg	
	NICKEL	J	2.2	3.4	LOQ	mg/Kg	
H14-SB02-25	BERYLLIUM	J	0.11	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.4	3.5	LOQ	mg/Kg	
H14-SB03-06	BERYLLIUM	J	0.043	0.17	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.3	3.5	LOQ	mg/Kg	
H14-SS01-01	CADMIUM	J	0.065	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.3	3.6	LOQ	mg/Kg	
H14-SS02-01	BERYLLIUM	J	0.052	0.17	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.052	0.17	LOQ	mg/Kg	
H14-SS03-01	BERYLLIUM	J	0.10	0.21	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.038	0.21	LOQ	mg/Kg	
	LEAD	J	2.1	4.2	LOQ	mg/Kg	
H16-SB01-05	ARSENIC	J	1.3	1.6	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.12	0.20	LOQ	mg/Kg	
	CADMIUM	J	0.066	0.20	LOQ	mg/Kg	
H16-SB01-05 DUP	ARSENIC	J	2.9	4.7	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.57	0.58	LOQ	mg/Kg	
H16-SS01-01	CADMIUM	J	0.13	0.22	LOQ	mg/Kg	J (all detects)

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H14-SB01-07 DUP	THALLIUM	J	0.077	0.13	LOQ	mg/Kg	J (all detects)
H14-SB02-25	THALLIUM	J	0.13	0.14	LOQ	mg/Kg	J (all detects)
H14-SS02-01	THALLIUM	J	0.13	0.14	LOQ	mg/Kg	J (all detects)
H16-SB01-05	THALLIUM	J	0.075	0.16	LOQ	mg/Kg	J (all detects)
H16-SS01-01	THALLIUM	JG	0.13	0.18	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H16-SB01-05	BENZOIC ACID	J	0.25	1.2	LOQ	mg/Kg	J (all detects)
H16-SB01-05 DUP	BENZOIC ACID	J	0.60	3.6	LOQ	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606524

Laboratory: RTILABS

EDD Filename: EDD_1606524_SEDD_2a_v28_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H16-SS01-01	CARBAZOLE	J	0.89	2.1	LOQ	mg/Kg	J (all detects)
	DIBENZOFURAN	J	0.16	2.1	LOQ	mg/Kg	
MP-SS02-01	CARBAZOLE	J	0.058	0.17	LOQ	mg/Kg	J (all detects)
	DIBENZOFURAN	J	0.030	0.17	LOQ	mg/Kg	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606580		
Date(s) of Collection:	June 14 th , 2016 – June 15 th , 2016		
Number/Type Samples & Analyses:	10 groundwater samples and 1 trip blank for a project-specific list of VOCs, PAHs, Lead, PCBs		
Data Reviewer:	Zachary Neigh AECOM/Baltimore MD		
Completed:	August 25 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606580. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR, Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-PB-STAR			Matrix: Water						

Sample ID: H4-SB01-GW		Collected: 6/15/2016 10:55:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	52	G	0.50	LOD	1.0	LOQ	ug/L	J	Fd

Sample ID: H4-SB01-GW DUP		Collected: 6/15/2016 10:55:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	23	G	0.50	LOD	1.0	LOQ	ug/L	J	Fd

Sample ID: H6-SB01-GW		Collected: 6/15/2016 12:35:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	33	G	0.50	LOD	1.0	LOQ	ug/L	J	Fd

Sample ID: H6-SB01-GW DUP		Collected: 6/15/2016 12:35:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	19	G	0.50	LOD	1.0	LOQ	ug/L	J	Fd

Method Category:	SVOA									
Method:	8082A			Matrix: Water						

Sample ID: H4-SB03-GW		Collected: 6/15/2016 9:30:00 AM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.038	U	0.038	LOD	0.094	LOQ	ug/L	UJ	Surr
AROCLOR 1221	0.038	U	0.038	LOD	0.094	LOQ	ug/L	UJ	Surr
AROCLOR 1232	0.039	U	0.039	LOD	0.19	LOQ	ug/L	UJ	Surr
AROCLOR 1242	0.038	U	0.038	LOD	0.19	LOQ	ug/L	UJ	Surr
AROCLOR 1248	0.038	U	0.038	LOD	0.094	LOQ	ug/L	UJ	Surr
AROCLOR 1254	0.038	U	0.038	LOD	0.19	LOQ	ug/L	UJ	Surr
AROCLOR 1260	0.038	U	0.038	LOD	0.19	LOQ	ug/L	UJ	Surr
Aroclor 1262	0.094	U	0.094	LOD	0.19	LOQ	ug/L	UJ	Surr
Aroclor 1268	0.038	U	0.038	LOD	0.094	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Water

Sample ID: AST35-SB01-GW		Collected: 6/16/2016 9:40:00 AM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB01-GW		Collected: 6/16/2016 9:40:00 AM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB01-GW		Collected: 6/14/2016 2:00:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	33	YQZ	2.4	LOD	24	LOQ	ug/L	J	Lcs, Lcs
PHENOL	0.96	UQ	0.96	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB01-GW		Collected: 6/14/2016 2:00:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UYZ	2.4	LOD	4.8	LOQ	ug/L	UJ	Lcs
CARBAZOLE	1.8	J	0.96	LOD	4.8	LOQ	ug/L	J	RI
DI-N-BUTYL PHTHALATE	1.1	J	0.96	LOD	4.8	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.96	UYQ	0.96	LOD	4.8	LOQ	ug/L	UJ	Lcs

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID: AST35-SB01-GW		Collected: 6/16/2016 9:40:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
2-Butanone [MEK]	5.0	J	5.0	LOD	10	LOQ	ug/L	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: AST35-SB01-GW		6/16/2016 9:40:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		

Sample ID: MP-SB01-GW		6/14/2016 2:00:00		Collected: PM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	36		0.60	LOD	10	LOQ	ug/L	U	Tb		
BENZENE	0.47	J	0.60	LOD	1.0	LOQ	ug/L	J	RI		
CARBON DISULFIDE	0.56	J	0.60	LOD	1.0	LOQ	ug/L	J	RI		

Sample ID: TB-GW-061416-03		6/14/2016 8:20:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,1,1,2-TETRACHLOROETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
ACETONE	3.8	JY	0.60	LOD	10	LOQ	ug/L	J	RI		
BROMODICHLOROMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLOROMETHANE	0.63	JYBQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs, Mb		
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
METHYLENE CHLORIDE	0.46	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb		
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
Trichlorofluoromethane [Freon-11]	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs		

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

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Data Review Summary

Lab Reporting Batch ID: 1606580

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA10 MBLK 06281A	6/28/2016 10:54:00 AM	ACETONE	1.8 ug/L	AST35-SB01-GW
VOA11B MBLK2 062	6/27/2016 3:17:00 AM	CHLOROMETHANE METHYLENE CHLORIDE	0.73 ug/L 0.56 ug/L	TB-GW-061416-03

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
TB-GW-061416-03(Initial/TOT)	CHLOROMETHANE	0.63 ug/L	1.0U ug/L
TB-GW-061416-03(Initial/TOT)	METHYLENE CHLORIDE	0.46 ug/L	5.0U ug/L

Surrogate Outlier Report

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H4-SB03-GW (Initial/TOT)	DECACHLOROBIPHENYL	33.9	40.00-135.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
TB-GW-061416-03 (Initial/TOT)	TOLUENE-D8	88.1	89.00-112.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
MP-SB01-GW (Initial/TOT)	Nitrobenzene-d5	220	44.00-120.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
AST35-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL	43.8	44.00-119.00	No Affected Compounds	
	PHENOL-D5	14.8	30.00-130.00		
MP-SB01-GW (Initial/TOT)	Nitrobenzene-d5	42.7	44.00-120.00	No Affected Compounds	
	PHENOL-D5	19.1	30.00-130.00		

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40190 LCSD-40190 (MP-SB01-GW)	BENZOIC ACID	42.6	-	50.00-130.00	61.18 (25.00)	BENZOIC ACID	J (all detects) UJ (all non-detects)
LCS-40190 LCSD-40190 (MP-SB01-GW)	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETHE N-NITROSODIMETHYLAMINE PHENOL	46.9 49.5 30.1 31.8	46.6 - 35.3 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETH N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)
LCS-40220 LCSD-40220 (AST35-SB01-GW)	4-NITROPHENOL BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	30 - 34.9 31.6	35.3 47.9 36.2 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0626 VOA11B LCSD2 062 (TB-GW-061416-03)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE Trichlorofluoromethane [Freon-11] Xylene (Total)	- 78.8 58.4 65.2 67.8 - - -	73.1 77.2 55.1 62.5 64.5 74.9 62.6 78.2	78.00-124.00 79.00-125.00 66.00-130.00 74.00-126.00 75.00-124.00 78.00-123.00 65.00-141.00 79.00-121.00	- - - - - - - -	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE Trichlorofluoromethane [Freon-11] Xylene (Total)	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0626 VOA11B LCSD2 062 (TB-GW-061416-03)	CHLOROMETHANE	151	142	50.00-139.00	-	CHLOROMETHANE	J+(all detects)
VOA10 LCSD 06281 (AST35-SB01-GW)	1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLORO BENZENE	- - -	60.5 64.8 81.1	62.00-128.00 66.00-130.00 82.00-118.00	- - -	1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLORO BENZENE	J-(all detects) UJ(all non-detects)

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Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-PB-STAR

Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	H6-SB01-GW (Total)	H6-SB01-GW DUP (Total)			
LEAD	33	19	54	30.00	J (all detects) UJ (all non-detects)

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	H4-SB01-GW (Total)	H4-SB01-GW DUP (Total)			
LEAD	52	23	77	30.00	J(all detects) UJ(all non-detects)

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-061416-03(Initial/TOT)	6/14/2016 8:20:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	3.8 ug/L 0.63 ug/L 0.46 ug/L	MP-SB01-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
MP-SB01-GW(Initial/TOT)	ACETONE	36 ug/L	36U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606580

Laboratory: RTILABS

EDD Filename: EDD_1606580_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
AST35-SB01-GW	2-Butanone [MEK]	J	5.0	10	LOQ	ug/L	J (all detects)
MP-SB01-GW	BENZENE	J	0.47	1.0	LOQ	ug/L	J (all detects)
	CARBON DISULFIDE	J	0.56	1.0	LOQ	ug/L	
TB-GW-061416-03	ACETONE	JY	3.8	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JYBQ	0.63	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.46	5.0	LOQ	ug/L	

Method: 8270D-MOD

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MP-SB01-GW	CARBAZOLE	J	1.8	4.8	LOQ	ug/L	J (all detects)
	DI-N-BUTYL PHTHALATE	J	1.1	4.8	LOQ	ug/L	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606593		
Date(s) of Collection:	June 14 th , 2016		
Number/Type Samples & Analyses:	19 soil samples for a project-specific list of SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 31 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606593. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of “J” data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The initial analysis of the LCS demonstrated a slightly high bias for several PAH compounds. The re-analysis demonstrated acceptable results. However, the lab flagged the samples on the original analysis. The affected samples were WDS-SB03-06, WDS-SB07-05, WDS-SB14-11, WDS-SB15-13, WDS-SB16-13, WDS-SB17-13, MP-SB01-04, MP-SB01-04 DUP, H21-SS01-01, H21-SB01-11, H21-SS02-01, H21-SB02-10.

Sample WDS-SB06-05 was analyzed under SVOC SIM as well as regular 8270 for PAHs. The results will be presented in SVOC SIM.

The following table defines the data qualifiers assigned by ADR and/or during manual data review of ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports. Preferred

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: H21-SB01-11		Collected: 6/14/2016 9:05:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.17	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.2	J	0.73	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: H21-SB02-10		Collected: 6/14/2016 8:55:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.4	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.078	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.026	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.0	J	0.73	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: H21-SB03-06		Collected: 6/14/2016 8:35:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	2.1	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI
NICKEL	1.8	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI
SILVER	0.25	J	0.18	LOD	0.70	LOQ	mg/Kg	J	RI

Sample ID: H21-SS01-01		Collected: 6/14/2016 9:00:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.062	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.038	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.0	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI

Sample ID: H21-SS02-01		Collected: 6/14/2016 8:50:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.70	LOD	1.4	LOQ	mg/Kg	J	RI
BERYLLIUM	0.035	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
CADMIUM	0.037	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID: H21-SS03-01		Collected: 6/14/2016 8:30:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.11	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.099	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB01-01		Collected: 6/14/2016 2:20:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.14	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI
CADMIUM	0.096	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB02-02		Collected: 6/14/2016 2:35:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.2	J	0.69	LOD	1.4	LOQ	mg/Kg	J	RI
BERYLLIUM	0.033	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
CADMIUM	0.082	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB03-06		Collected: 6/14/2016 2:40:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.4	J	0.77	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.065	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.061	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB04-01		Collected: 6/14/2016 4:00:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.12	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.050	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB05-01		Collected: 6/14/2016 4:05:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.069	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: WDS-SB05-01		Collected: 6/14/2016 4:05:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.13	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
SILVER	0.10	J	0.19	LOD	0.74	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB06-05		Collected: 6/14/2016 9:45:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.063	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB07-05		Collected: 6/14/2016 9:30:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.5	J	0.91	LOD	1.8	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB14-11		Collected: 6/14/2016 1:10:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.056	J	0.033	LOD	0.16	LOQ	mg/Kg	J	RI
LEAD	3.0	J	0.65	LOD	3.3	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB15-13		Collected: 6/14/2016 11:45:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.029	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB16-13		Collected: 6/14/2016 12:15:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.85	J	0.75	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.046	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	1.9	J	0.75	LOD	3.7	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: WDS-SB17-13		Collected: 6/14/2016 12:50:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.87	J	0.66	LOD	1.3	LOQ	mg/Kg	J	RI
LEAD	2.0	J	0.66	LOD	3.3	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID: H21-SB01-11		Collected: 6/14/2016 9:05:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.12	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: H21-SB02-10		Collected: 6/14/2016 8:55:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.071	JG	0.036	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H21-SS01-01		Collected: 6/14/2016 9:00:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.11	JG	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H21-SS02-01		Collected: 6/14/2016 8:50:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.051	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: H21-SS03-01		Collected: 6/14/2016 8:30:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.091	JG	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: WDS-SB01-01		Collected: 6/14/2016 2:20:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.12	JG	0.042	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB02-02		Collected: 6/14/2016 2:35:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.068	JG	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB03-06		Collected: 6/14/2016 2:40:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.067	JG	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB04-01		Collected: 6/14/2016 4:00:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.11	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB05-01		Collected: 6/14/2016 4:05:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.085	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB07-05		Collected: 6/14/2016 9:30:00 AM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.089	J	0.045	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB14-11		Collected: 6/14/2016 1:10:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.043	J	0.033	LOD	0.13	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID: WDS-SB15-13	Collected: AM			6/14/2016 11:45:00				Analysis Type: Initial	Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.060	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: WDS-SB16-13	Collected: PM			6/14/2016 12:15:00				Analysis Type: Initial	Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.075	JG	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: WDS-SB17-13	Collected: PM			6/14/2016 12:50:00				Analysis Type: Initial	Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.091	JG	0.034	LOD	0.14	LOQ	mg/Kg	J	RI	

Method Category:	SVOA								
Method:	8082A	Matrix:	Soil						

Sample ID: H21-SB03-06	Collected: AM			6/14/2016 8:35:00				Analysis Type: Initial	Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1221	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1232	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1242	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1248	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1254	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1260	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
Aroclor 1262	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	
Aroclor 1268	0.0074	U	0.0074	LOD	0.037	LOQ	mg/Kg	UJ	Surr	

Sample ID: WDS-SB02-02	Collected: PM			6/14/2016 2:35:00				Analysis Type: Initial	Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8082A	Matrix: Soil

Sample ID: WDS-SB02-02 Collected: 6/14/2016 2:35:00 PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1221	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr

Method Category:	SVOA	
Method:	8270D	Matrix: Soil

Sample ID: WDS-SB01-01 Collected: 6/14/2016 2:20:00 PM Analysis Type: Initial-ACID Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.62	U	0.62	LOD	3.0	LOQ	mg/Kg	UJ	Surr
2,4,6-TRICHLOROPHENOL	0.62	U	0.62	LOD	3.0	LOQ	mg/Kg	UJ	Surr
2,4-DICHLOROPHENOL	1.5	U	1.5	LOD	3.0	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	1.5	U	1.5	LOD	3.0	LOQ	mg/Kg	UJ	Surr
2,4-DINITROPHENOL	3.1	UY	3.1	LOD	15	LOQ	mg/Kg	UJ	Surr
2-CHLOROPHENOL	1.5	U	1.5	LOD	3.0	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	1.5	U	1.5	LOD	3.0	LOQ	mg/Kg	UJ	Surr
4,6-DINITRO-2-METHYLPHENOL	1.5	UY	1.5	LOD	5.9	LOQ	mg/Kg	UJ	Surr
4-CHLORO-3-METHYLPHENOL	0.62	U	0.62	LOD	3.0	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	6.2	U	6.2	LOD	15	LOQ	mg/Kg	UJ	Surr
BENZOIC ACID	6.2	UY	6.2	LOD	19	LOQ	mg/Kg	UJ	Surr
PENTACHLOROPHENOL	1.5	U	1.5	LOD	3.0	LOQ	mg/Kg	UJ	Surr
PHENOL	1.5	U	1.5	LOD	3.0	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D
Matrix: Soil

Sample ID: WDS-SB01-01	Collected: 6/14/2016 2:20:00 PM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 3						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.037	J	0.093	LOD	0.12	LOQ	mg/Kg	J	RI
ACENAPHTHYLENE	0.037	J	0.093	LOD	0.12	LOQ	mg/Kg	J	RI
ANTHRACENE	0.10	J	0.093	LOD	0.12	LOQ	mg/Kg	J	RI
DIBENZO(A,H)ANTHRACENE	0.093	J	0.093	LOD	0.12	LOQ	mg/Kg	J	RI
FLUORENE	0.031	J	0.093	LOD	0.12	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB06-05	Collected: 6/14/2016 9:45:00 AM	Analysis Type: Dilution-1-BASE/ NEUTRAL	Dilution: 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBAZOLE	9.7		0.18	LOD	1.8	LOQ	mg/Kg	J-	EtoA
DIBENZOFURAN	11		0.18	LOD	1.8	LOQ	mg/Kg	J-	EtoA

Sample ID: WDS-SB06-05	Collected: 6/14/2016 9:45:00 AM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENOL	0.042	J	0.092	LOD	0.18	LOQ	mg/Kg	J	RI

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID: H21-SB03-06	Collected: 6/14/2016 8:35:00 AM	Analysis Type: Dilution-1-BASE/ NEUTRAL	Dilution: 3						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.011	Q	0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Lcs, Surr
2-METHYLNAPHTHALENE	0.012		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
BENZ(A)ANTHRACENE	0.013		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
BENZO(A)PYRENE	0.0031		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
BENZO(B)FLUORANTHENE	0.022		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	0.0051		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
BENZO(K)FLUORANTHENE	0.0053		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
CHRYSENE	0.011		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	0.025		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Soil

Sample ID:H21-SB03-06		6/14/2016 8:35:00			Dilution-1-BASE/				
		Collected: AM	Analysis Type: NEUTRAL			Dilution: 3			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
INDENO(1,2,3-CD)PYRENE	0.0051		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	0.014		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.012		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr
PYRENE	0.028		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Surr

Sample ID:H21-SS01-01		6/14/2016 9:00:00			Initial-BASE/				
		Collected: AM	Analysis Type: NEUTRAL			Dilution: 3			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.022	Q	0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Lcs

Sample ID:H21-SS02-01		6/14/2016 8:50:00			Initial-BASE/				
		Collected: AM	Analysis Type: NEUTRAL			Dilution: 3			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0045	Q	0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Lcs

Sample ID:H21-SS03-01		6/14/2016 8:30:00			Initial-BASE/				
		Collected: AM	Analysis Type: NEUTRAL			Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.013	Q	0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Lcs, Surr
2-METHYLNAPHTHALENE	0.016		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	0.0057		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
ACENAPHTHYLENE	0.0025		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
ANTHRACENE	0.021		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	0.0042		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
DIBENZO(A,H)ANTHRACENE	0.0025		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
FLUORENE	0.0055		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.022		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	0.015		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Surr

Sample ID:WDS-SB04-01		6/14/2016 4:00:00			Initial2-BASE/				
		Collected: PM	Analysis Type: NEUTRAL			Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0012	Q	0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID: WDS-SB04-01		6/14/2016 4:00:00 Collected: PM			Initial2-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.0016		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	0.00089		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
ACENAPHTHYLENE	0.0066		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
ANTHRACENE	0.0075		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
FLUORENE	0.0014		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.0085		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	0.0022		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr

Sample ID: WDS-SB05-01		6/14/2016 4:05:00 Collected: PM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0045	Q	0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Lcs, Surr
2-METHYLNAPHTHALENE	0.0062		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	0.013		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
ACENAPHTHYLENE	0.0074		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
DIBENZO(A,H)ANTHRACENE	0.013		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
FLUORENE	0.014		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	0.0069		0.00075	LOD	0.00075	LOQ	mg/Kg	J+	Surr

Sample ID: WDS-SB06-05		6/14/2016 9:45:00 Collected: AM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.7	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Lcs, Surr
2-METHYLNAPHTHALENE	2.0	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	7.6	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
ACENAPHTHYLENE	0.26	Q	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
ANTHRACENE	10	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
BENZ(A)ANTHRACENE	170	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
BENZO(A)PYRENE	8.8	J	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
BENZO(B)FLUORANTHENE	16	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	2.9	J	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
BENZO(K)FLUORANTHENE	0.049		0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID: WDS-SB06-05		6/14/2016 9:45:00			Initial-BASE/			Dilution: 10	
		Collected: AM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	20	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
DIBENZO(A,H)ANTHRACENE	1.7	J	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	23	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
FLUORENE	9.7	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	2.9	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	1.9	J	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	22	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr
PYRENE	99	JQ	0.0075	LOD	0.0075	LOQ	mg/Kg	J+	Surr

Sample ID: WDS-SB07-05		6/14/2016 9:30:00			Initial-BASE/			Dilution: 3	
		Collected: AM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0050	Q	0.0027	LOD	0.0027	LOQ	mg/Kg	J+	Lcs

Sample ID: WDS-SB14-11		6/14/2016 1:10:00			Initial-BASE/			Dilution: 3	
		Collected: PM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0046	Q	0.0021	LOD	0.0021	LOQ	mg/Kg	J+	Lcs

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Soil

Sample ID: H21-SB01-11		6/14/2016 9:05:00			Initial-ACID			Dilution: 1	
		Collected: AM	Analysis Type: Initial-ACID						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.37	U	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H21-SB02-10		6/14/2016 8:55:00			Initial-ACID			Dilution: 1	
		Collected: AM	Analysis Type: Initial-ACID						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.38	U	0.38	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID: H21-SB02-10	6/14/2016 8:55:00		Initial-BASE/		Analysis Type: NEUTRAL			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DI-N-BUTYL PHTHALATE	0.021	J	0.038	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: H21-SB03-06	6/14/2016 8:35:00		Initial-ACID		Analysis Type: Initial-ACID			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.76	J	0.37	LOD	1.1	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H21-SS01-01	6/14/2016 9:00:00		Initial-ACID		Analysis Type: Initial-ACID			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.33	J	0.36	LOD	1.1	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H21-SS01-01	6/14/2016 9:00:00		Initial-BASE/		Analysis Type: NEUTRAL			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIBENZOFURAN	0.066	J	0.018	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: H21-SS02-01	6/14/2016 8:50:00		Initial-ACID		Analysis Type: Initial-ACID			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.36	U	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H21-SS03-01	6/14/2016 8:30:00		Initial-ACID		Analysis Type: Initial-ACID			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.37	J	0.38	LOD	1.1	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H21-SS03-01	6/14/2016 8:30:00		Initial-BASE/		Analysis Type: NEUTRAL			Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZYL ALCOHOL	0.027	J	0.019	LOD	0.75	LOQ	mg/Kg	J	RI
DIBENZOFURAN	0.011	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID: WDS-SB02-02		Collected: 6/14/2016 2:35:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.36	UYQ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB02-02		Collected: 6/14/2016 2:35:00 PM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROTOLUENE	0.028	J	0.018	LOD	0.17	LOQ	mg/Kg	J	RI
DI-N-BUTYL PHTHALATE	0.027	J	0.036	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB03-06		Collected: 6/14/2016 2:40:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.38	UYQ	0.38	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB03-06		Collected: 6/14/2016 2:40:00 PM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL) PHTHALATE	0.048	J	0.038	LOD	0.18	LOQ	mg/Kg	J	RI
Butyl benzyl phthalate	0.089	J	0.038	LOD	0.18	LOQ	mg/Kg	J	RI
CARBAZOLE	0.022	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI
DIMETHYL PHTHALATE	0.094	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI
DI-N-BUTYL PHTHALATE	0.035	J	0.038	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB04-01		Collected: 6/14/2016 4:00:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.18	J	0.37	LOD	1.1	LOQ	mg/Kg	J	RI, Lcs

Sample ID: WDS-SB05-01		Collected: 6/14/2016 4:05:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.20	JQ	0.37	LOD	1.1	LOQ	mg/Kg	J	RI, Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: WDS-SB05-01	Collected: 6/14/2016 4:05:00 PM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,4-DICHLOROBENZENE	0.013	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI
CARBAZOLE	0.016	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB07-05	Collected: 6/14/2016 9:30:00 AM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.45	UYQ	0.45	LOD	1.3	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB14-11	Collected: 6/14/2016 1:10:00 PM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.034	UX	0.034	LOD	0.16	LOQ	mg/Kg	UJ	Ms, Surr
2,4,6-TRICHLOROPHENOL	0.034	UX	0.034	LOD	0.16	LOQ	mg/Kg	UJ	Ms, Surr
2,4-DICHLOROPHENOL	0.085	U	0.085	LOD	0.16	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	0.085	UX	0.085	LOD	0.16	LOQ	mg/Kg	UJ	Ms, Surr
2,4-DINITROPHENOL	0.17	UYX	0.17	LOD	0.85	LOQ	mg/Kg	UJ	Ms, Surr
2-CHLOROPHENOL	0.085	U	0.085	LOD	0.16	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	0.085	UX	0.085	LOD	0.16	LOQ	mg/Kg	UJ	Ms, Surr
4,6-DINITRO-2-METHYLPHENOL	0.085	UYX	0.085	LOD	0.33	LOQ	mg/Kg	UJ	Ms, Surr
4-CHLORO-3-METHYLPHENOL	0.034	U	0.034	LOD	0.16	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	0.34	UX	0.34	LOD	0.85	LOQ	mg/Kg	UJ	Ms, Surr
BENZOIC ACID	0.34	UYQX	0.34	LOD	1.0	LOQ	mg/Kg	UJ	Ms, Lcs, Surr
PENTACHLOROPHENOL	0.085	UX	0.085	LOD	0.16	LOQ	mg/Kg	UJ	Ms, Surr
PHENOL	0.085	U	0.085	LOD	0.16	LOQ	mg/Kg	UJ	Surr

Sample ID: WDS-SB14-11	Collected: 6/14/2016 1:10:00 PM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.68	UX	0.68	LOD	1.0	LOQ	mg/Kg	UJ	Ms
4-NITROANILINE	0.085	UX	0.085	LOD	0.33	LOQ	mg/Kg	UJ	Ms
N-NITROSODIPHENYLAMINE	0.017	UX	0.017	LOD	0.16	LOQ	mg/Kg	UJ	Ms

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8270D-MOD	Matrix:	Soil						

Sample ID: WDS-SB15-13	Collected: 6/14/2016 11:45:00 AM			Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.36	UYQ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB16-13	Collected: 6/14/2016 12:15:00 PM			Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.37	UYQ	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB17-13	Collected: 6/14/2016 12:50:00 PM			Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.34	U	0.34	LOD	1.0	LOQ	mg/Kg	UJ	Lcs

Method Category:	SVOA								
Method:	8270D-SIM-STAR	Matrix:	Soil						

Sample ID: MP-SB01-04	Collected: 6/14/2016 10:25:00 AM			Analysis Type: Initial-BASE/NEUTRAL				Dilution: 3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
ACENAPHTHYLENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
ANTHRACENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
BENZ(A)ANTHRACENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
BENZO(A)PYRENE	0.0025	U	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
BENZO(B)FLUORANTHENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
BENZO(G,H,I)PERYLENE	0.0025	U	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
BENZO(K)FLUORANTHENE	0.0025	U	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
CHRYSENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
DIBENZO(A,H)ANTHRACENE	0.0025	U	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
FLUORANTHENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
FLUORENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr
PHENANTHRENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID: MP-SB01-04 Collected: 6/14/2016 10:25:00 AM Initial-BASE/ Analysis Type: NEUTRAL Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	0.0025	UQ	0.0025	LOD	0.0025	LOQ	mg/Kg	UJ	Surr

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
EtoA	Extraction to Analysis Estimation
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606593

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606593
EDD Filename: EDD_1606593_SEDD_2a_v31_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D Preparation Method: SW3546
Matrix: Soil

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB06-05 (Dilution-1)	Extraction To Analysis	42.00	40.00	DAYS	J- (all detects)
WDS-SB06-05 (Dilution-2)		42.00	40.00	DAYS	UJ (all non-detects)

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606593
EDD Filename: EDD_1606593_SEDD_2a_v31_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D Preparation Method: SW3546
Matrix: Soil

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB06-05 (Dilution-1)	Extraction To Analysis	42.00	40.00	DAYS	J- (all detects)
WDS-SB06-05 (Dilution-2)		42.00	40.00	DAYS	UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40445	7/21/2016 2:41:09 PM	SODIUM	2.1 mg/Kg	H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 WDS-SB01-01 WDS-SB02-02 WDS-SB03-06 WDS-SB04-01 WDS-SB05-01 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13 WDS-SB16-13 WDS-SB17-13

Surrogate Outlier Report

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H21-SB03-06 (Initial)	DECACHLOROBIPHENYL	17.2	60.00-125.00	All Target Analytes	J- (all detects) UJ (all non-detects)
	TETRACHLORO-M-XYLENE	18.1	44.00-130.00		
WDS-SB02-02 (Initial)	DECACHLOROBIPHENYL	51.2	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
WDS-SB01-01 (Initial)	2,4,6-TRIBROMOPHENOL	0	39.00-132.00	All Acid Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROPHENOL	0	35.00-115.00		
	PHENOL-D5	0	33.00-122.00		
WDS-SB06-05 (Initial)	Terphenyl-d14	154	54.00-127.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H21-SB03-06 (Dilution-1)	Nitrobenzene-d5	151	44.00-125.00	All Base/Neutral Target Analytes	J+(all detects)
	Terphenyl-d14	160	58.00-133.00		
H21-SS03-01 (Initial)	2-FLUOROBIPHENYL	132	46.00-115.00	All Base/Neutral Target Analytes	J+(all detects)
	Nitrobenzene-d5	160	44.00-125.00		
	Terphenyl-d14	165	58.00-133.00		
WDS-SB04-01 (Initial2)	Terphenyl-d14	137	58.00-133.00	All Base/Neutral Target Analytes	J+(all detects)
WDS-SB05-01 (Initial)	2-FLUOROBIPHENYL	118	46.00-115.00	All Base/Neutral Target Analytes	J+(all detects)
	Nitrobenzene-d5	135	44.00-125.00		
	Terphenyl-d14	154	58.00-133.00		
WDS-SB06-05 (Initial)	Terphenyl-d14	3420	58.00-133.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
WDS-SB14-11 (Initial)	2,4,6-TRIBROMOPHENOL	16.7	39.00-132.00	All Acid Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROPHENOL	32.6	35.00-115.00		
WDS-SB15-13 (Initial)	2,4,6-TRIBROMOPHENOL	35.5	39.00-132.00	No Affected Compounds	
WDS-SB16-13 (Initial)	2,4,6-TRIBROMOPHENOL	33.6	39.00-132.00	No Affected Compounds	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-SIM-STAR
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
MP-SB01-04 (Initial)	Nitrobenzene-d5	41.5	44.00-125.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB14-11MS WDS-SB14-11MSD (WDS-SB14-11)	4-NITROPHENOL	0	15.7	30.00-132.00	200 (25.00)	4-NITROPHENOL	J (all detects) UJ (all non-detects)
WDS-SB14-11MS WDS-SB14-11MSD (WDS-SB14-11)	2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL 2,4-Dimethyl phenol 2,4-DINITROPHENOL 2-NITROPHENOL 3,3'-DICHLOROBENZIDINE 4,6-DINITRO-2-METHYLPHENOL 4-NITROANILINE BENZOIC ACID N-NITROSODIPHENYLAMINE PENTACHLOROPHENOL	26.2 27.9 29.7 0 30.7 0 15.9 44.7 0 22.6 11.5	31.4 30.3 - 0 32.9 0 16.3 - 0 24.5 11.3	41.00-124.00 39.00-126.00 30.00-127.00 50.00-130.00 36.00-123.00 22.00-121.00 29.00-132.00 50.00-130.00 40.00-117.00 38.00-127.00 25.00-133.00	- - - - - - - - - - -	2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL 2,4-Dimethyl phenol 2,4-DINITROPHENOL 2-NITROPHENOL 3,3'-DICHLOROBENZIDINE 4,6-DINITRO-2-METHYLPHENOL 4-NITROANILINE BENZOIC ACID N-NITROSODIPHENYLAMINE PENTACHLOROPHENOL	J-(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB14-11MS WDS-SB14-11MSD (WDS-SB14-11)	4-NITROPHENOL	0	15.7	30.00-132.00	200 (25.00)	4-NITROPHENOL	J(all detects) UJ(all non-detects)
WDS-SB14-11MS WDS-SB14-11MSD (WDS-SB14-11)	2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL 2,4-Dimethyl phenol 2,4-DINITROPHENOL 2-NITROPHENOL 3,3'-DICHLOROBENZIDINE 4,6-DINITRO-2-METHYLPHENOL 4-NITROANILINE BENZOIC ACID N-NITROSODIPHENYLAMINE PENTACHLOROPHENOL	26.2 27.9 29.7 0 30.7 0 15.9 44.7 0 22.6 11.5	31.4 30.3 - 0 32.9 0 16.3 - 0 24.5 11.3	41.00-124.00 39.00-126.00 30.00-127.00 50.00-130.00 36.00-123.00 22.00-121.00 29.00-132.00 50.00-130.00 40.00-117.00 38.00-127.00 25.00-133.00	- - - - - - - - - - -	2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL 2,4-Dimethyl phenol 2,4-DINITROPHENOL 2-NITROPHENOL 3,3'-DICHLOROBENZIDINE 4,6-DINITRO-2-METHYLPHENOL 4-NITROANILINE BENZOIC ACID N-NITROSODIPHENYLAMINE PENTACHLOROPHENOL	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40226 (H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 WDS-SB01-01 WDS-SB02-02 WDS-SB03-06 WDS-SB04-01 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13 WDS-SB16-13 WDS-SB17-13)	BENZOIC ACID	19.7	-	40.00-117.00	-	BENZOIC ACID	J- (all detects) UJ (all non-detects)
LCS-40244 (WDS-SB05-01)	BENZOIC ACID	0	-	40.00-117.00	-	BENZOIC ACID	J-(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40258 (H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 MP-SB01-04 MP-SB01-04 DUP WDS-SB03-06 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13 WDS-SB16-13 WDS-SB17-13)	1-METHYLNAPHTHALENE	115	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-SIM-STAR
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
1-LCS-40258 (H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 MP-SB01-04 MP-SB01-04 DUP WDS-SB03-06 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13 WDS-SB16-13 WDS-SB17-13)	ACENAPHTHENE ACENAPHTHYLENE ANTHRACENE BENZ(A)ANTHRACENE BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE FLUORENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE PYRENE	120 120 116 133 148 121 122 118 151 120 126	- - - - - - - - - - -	44.00-111.00 39.00-116.00 50.00-114.00 54.00-122.00 53.00-128.00 57.00-118.00 55.00-119.00 47.00-114.00 49.00-130.00 49.00-113.00 55.00-117.00	- - - - - - - - - - -	ACENAPHTHENE ACENAPHTHYLENE ANTHRACENE BENZ(A)ANTHRACENE BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE FLUORENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE PYRENE	J+(all detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40280 (WDS-SB04-01 WDS-SB05-01)	1-METHYLNAPHTHALENE	115	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H21-SB01-11	ARSENIC	J	1.1	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.17	0.18	LOQ	mg/Kg	
	LEAD	J	3.2	3.6	LOQ	mg/Kg	
H21-SB02-10	ARSENIC	J	1.4	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.078	0.18	LOQ	mg/Kg	
	CADMIUM	J	0.026	0.18	LOQ	mg/Kg	
	LEAD	J	3.0	3.6	LOQ	mg/Kg	
H21-SB03-06	LEAD	J	2.1	3.5	LOQ	mg/Kg	J (all detects)
	NICKEL	J	1.8	3.5	LOQ	mg/Kg	
	SILVER	J	0.25	0.70	LOQ	mg/Kg	
H21-SS01-01	BERYLLIUM	J	0.062	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.038	0.18	LOQ	mg/Kg	
	LEAD	J	3.0	3.5	LOQ	mg/Kg	
H21-SS02-01	ARSENIC	J	1.1	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.035	0.17	LOQ	mg/Kg	
	CADMIUM	J	0.037	0.17	LOQ	mg/Kg	
H21-SS03-01	BERYLLIUM	J	0.11	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.099	0.19	LOQ	mg/Kg	
WDS-SB01-01	BERYLLIUM	J	0.14	0.20	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.096	0.20	LOQ	mg/Kg	
WDS-SB02-02	ARSENIC	J	1.2	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.033	0.17	LOQ	mg/Kg	
	CADMIUM	J	0.082	0.17	LOQ	mg/Kg	
WDS-SB03-06	ARSENIC	J	1.4	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.065	0.19	LOQ	mg/Kg	
	CADMIUM	J	0.061	0.19	LOQ	mg/Kg	
WDS-SB04-01	BERYLLIUM	J	0.12	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.050	0.19	LOQ	mg/Kg	
WDS-SB05-01	BERYLLIUM	J	0.069	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.13	0.19	LOQ	mg/Kg	
	SILVER	J	0.10	0.74	LOQ	mg/Kg	
WDS-SB06-05	BERYLLIUM	J	0.063	0.18	LOQ	mg/Kg	J (all detects)
WDS-SB07-05	ARSENIC	J	1.5	1.8	LOQ	mg/Kg	J (all detects)
WDS-SB14-11	BERYLLIUM	J	0.056	0.16	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.0	3.3	LOQ	mg/Kg	
WDS-SB15-13	CADMIUM	J	0.029	0.17	LOQ	mg/Kg	J (all detects)
WDS-SB16-13	ARSENIC	J	0.85	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.046	0.19	LOQ	mg/Kg	
	LEAD	J	1.9	3.7	LOQ	mg/Kg	
WDS-SB17-13	ARSENIC	J	0.87	1.3	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.0	3.3	LOQ	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H21-SB01-11	THALLIUM	JG	0.12	0.15	LOQ	mg/Kg	J (all detects)
H21-SB02-10	THALLIUM	JG	0.071	0.14	LOQ	mg/Kg	J (all detects)
H21-SS01-01	THALLIUM	JG	0.11	0.14	LOQ	mg/Kg	J (all detects)
H21-SS02-01	THALLIUM	JG	0.051	0.15	LOQ	mg/Kg	J (all detects)
H21-SS03-01	THALLIUM	JG	0.091	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB01-01	THALLIUM	JG	0.12	0.17	LOQ	mg/Kg	J (all detects)
WDS-SB02-02	THALLIUM	JG	0.068	0.14	LOQ	mg/Kg	J (all detects)
WDS-SB03-06	THALLIUM	JG	0.067	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB04-01	THALLIUM	JG	0.11	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB05-01	THALLIUM	JG	0.085	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB07-05	THALLIUM	J	0.089	0.18	LOQ	mg/Kg	J (all detects)
WDS-SB14-11	THALLIUM	J	0.043	0.13	LOQ	mg/Kg	J (all detects)
WDS-SB15-13	THALLIUM	J	0.060	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB16-13	THALLIUM	JG	0.075	0.14	LOQ	mg/Kg	J (all detects)
WDS-SB17-13	THALLIUM	JG	0.091	0.14	LOQ	mg/Kg	J (all detects)

Method: 8270D
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB01-01	ACENAPHTHENE	J	0.037	0.12	LOQ	mg/Kg	J (all detects)
	ACENAPHTHYLENE	J	0.037	0.12	LOQ	mg/Kg	
	ANTHRACENE	J	0.10	0.12	LOQ	mg/Kg	
	DIBENZO(A,H)ANTHRACENE	J	0.093	0.12	LOQ	mg/Kg	
	FLUORENE	J	0.031	0.12	LOQ	mg/Kg	
WDS-SB06-05	PHENOL	J	0.042	0.18	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H21-SB02-10	DI-N-BUTYL PHTHALATE	J	0.021	0.18	LOQ	mg/Kg	J (all detects)
H21-SB03-06	BENZOIC ACID	J	0.76	1.1	LOQ	mg/Kg	J (all detects)
H21-SS01-01	BENZOIC ACID	J	0.33	1.1	LOQ	mg/Kg	J (all detects)
	DIBENZOFURAN	J	0.066	0.17	LOQ	mg/Kg	
H21-SS03-01	BENZOIC ACID	J	0.37	1.1	LOQ	mg/Kg	J (all detects)
	BENZYL ALCOHOL	J	0.027	0.75	LOQ	mg/Kg	
	DIBENZOFURAN	J	0.011	0.18	LOQ	mg/Kg	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

Reporting Limit Outliers

Lab Reporting Batch ID: 1606593

Laboratory: RTILABS

EDD Filename: EDD_1606593_SEDD_2a_v31_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB02-02	2,4-DINITROTOLUENE	J	0.028	0.17	LOQ	mg/Kg	J (all detects)
	DI-N-BUTYL PHTHALATE	J	0.027	0.17	LOQ	mg/Kg	
WDS-SB03-06	BIS(2-ETHYLHEXYL) PHTHALATE	J	0.048	0.18	LOQ	mg/Kg	J (all detects)
	Butyl benzyl phthalate	J	0.089	0.18	LOQ	mg/Kg	
	CARBAZOLE	J	0.022	0.18	LOQ	mg/Kg	
	DIMETHYL PHTHALATE	J	0.094	0.18	LOQ	mg/Kg	
	DI-N-BUTYL PHTHALATE	J	0.035	0.18	LOQ	mg/Kg	
WDS-SB04-01	BENZOIC ACID	J	0.18	1.1	LOQ	mg/Kg	J (all detects)
WDS-SB05-01	1,4-DICHLOROBENZENE	J	0.013	0.18	LOQ	mg/Kg	J (all detects)
	BENZOIC ACID	JQ	0.20	1.1	LOQ	mg/Kg	
	CARBAZOLE	J	0.016	0.18	LOQ	mg/Kg	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606601		
Date(s) of Collection:	June 15 th , 2016		
Number/Type Samples & Analyses:	8 soil samples for a project-specific list of SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 31 st , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606601. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- NA Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or during manual data review of the ADR output.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C			Matrix: Soil						

6/15/2016 8:40:00										
Sample ID: H1-SS01-01		Collected: AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.78	J	0.48	LOD	0.97	LOQ	mg/Kg	J	RI	
ARSENIC	0.90	J	0.97	LOD	1.9	LOQ	mg/Kg	J	RI	
BERYLLIUM	0.063	J	0.048	LOD	0.24	LOQ	mg/Kg	J	RI	
CADMIUM	0.066	J	0.048	LOD	0.24	LOQ	mg/Kg	J	RI	
COBALT	0.78	J	0.24	LOD	0.97	LOQ	mg/Kg	J	RI	
NICKEL	2.4	J	0.97	LOD	4.8	LOQ	mg/Kg	J	RI	
LEAD	2.5	J	0.97	LOD	4.8	LOQ	mg/Kg	J	RI	

6/15/2016 8:50:00										
Sample ID: H1-SS01-02		Collected: AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BERYLLIUM	0.025	J	0.044	LOD	0.22	LOQ	mg/Kg	J	RI	
CADMIUM	0.045	J	0.044	LOD	0.22	LOQ	mg/Kg	J	RI	
LEAD	2.9	J	0.88	LOD	4.4	LOQ	mg/Kg	J	RI	
NICKEL	2.4	J	0.88	LOD	4.4	LOQ	mg/Kg	J	RI	

6/15/2016 9:00:00										
Sample ID: H1-SS02-01		Collected: AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ARSENIC	0.86	J	0.90	LOD	1.8	LOQ	mg/Kg	J	RI	
LEAD	3.6	J	0.90	LOD	4.5	LOQ	mg/Kg	J	RI	
NICKEL	2.8	J	0.90	LOD	4.5	LOQ	mg/Kg	J	RI	
SILVER	0.63	J	0.23	LOD	0.90	LOQ	mg/Kg	J	RI	

6/15/2016 9:05:00										
Sample ID: H1-SS02-02		Collected: AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
LEAD	3.3	J	0.77	LOD	3.9	LOQ	mg/Kg	J	RI	
SILVER	0.31	J	0.19	LOD	0.77	LOQ	mg/Kg	J	RI	

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: H2-SS01-01		Collected: 6/15/2016 9:40:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.083	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.13	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: H2-SS01-02		Collected: 6/15/2016 9:50:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.84	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.080	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.090	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: H2-SS02-01		Collected: 6/15/2016 10:00:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.14	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.16	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	16000		38	LOD	110	LOQ	mg/Kg	J+	Ms
MAGNESIUM	2300		38	LOD	380	LOQ	mg/Kg	J+	Ms
MANGANESE	260		1.9	LOD	7.6	LOQ	mg/Kg	J+	Ms

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Dilution-2			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINIUM	12000		150	LOD	380	LOQ	mg/Kg	J+	Ms

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	35	X	3.8	LOD	7.6	LOQ	mg/Kg	J+	Ms

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.14	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CALCIUM	650	X	7.6	LOD	38	LOQ	mg/Kg	J+	Ms
CHROMIUM	18	X	0.31	LOD	0.38	LOQ	mg/Kg	J+	Ms
COPPER	42	X	0.76	LOD	3.8	LOQ	mg/Kg	J+	Ms
POTASSIUM	1400	X	7.6	LOD	15	LOQ	mg/Kg	J+	Ms
SODIUM	83	X	3.8	LOD	38	LOQ	mg/Kg	J+	Ms
VANADIUM	23	X	0.76	LOD	1.9	LOQ	mg/Kg	J+	Ms
ZINC	110	X	0.38	LOD	3.8	LOQ	mg/Kg	J+	Ms

Method Category:	METALS								
Method:	6020A-TL	Matrix:		Soil					

Sample ID: H1-SS01-01		Collected: 6/15/2016 8:40:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.068	J	0.048	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: H1-SS01-02		Collected: 6/15/2016 8:50:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.050	J	0.045	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: H1-SS02-02		Collected: 6/15/2016 9:05:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.057	JG	0.040	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: H2-SS01-01		Collected: 6/15/2016 9:40:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.082	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL	Matrix:		Soil						

Sample ID: H2-SS01-02		Collected: 6/15/2016 9:50:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.078	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H2-SS02-01		Collected: 6/15/2016 10:00:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.12	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.13	JG	0.039	LOD	0.16	LOQ	mg/Kg	J	RI	

Method Category:	SVOA									
Method:	8082A	Matrix:		Soil						

Sample ID: H2-SS01-01		Collected: 6/15/2016 9:40:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1221	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1232	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1242	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1248	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1254	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
AROCLOR 1260	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
Aroclor 1262	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	
Aroclor 1268	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID: H1-SS01-02		Collected: 6/15/2016 8:50:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.0019		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
BENZO(B)FLUORANTHENE	0.0030		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	0.0016		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
BENZO(K)FLUORANTHENE	0.0020		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
CHRYSENE	0.0021		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	0.0051		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.0016		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.0025		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr
PYRENE	0.0041		0.00091	LOD	0.00091	LOQ	mg/Kg	J+	Surr

Sample ID: H1-SS02-01		Collected: 6/15/2016 9:00:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.0013		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	0.0018		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr
CHRYSENE	0.0013		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	0.0031		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.0018		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.0014		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr
PYRENE	0.0024		0.00092	LOD	0.00092	LOQ	mg/Kg	J+	Surr

Sample ID: H2-SS01-01		Collected: 6/15/2016 9:40:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.00078		0.00074	LOD	0.00074	LOQ	mg/Kg	J+	Lcs

Sample ID: H2-SS01-02		Collected: 6/15/2016 9:50:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.00099		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Lcs, Surr
2-METHYLNAPHTHALENE	0.0015		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	0.00087		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Soil

Sample ID:H2-SS01-02		6/15/2016 9:50:00			Initial-BASE/			Dilution: 1	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.0020		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
BENZ(A)ANTHRACENE	0.029		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
BENZO(A)PYRENE	0.029		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	0.00092		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
BENZO(K)FLUORANTHENE	0.0056		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
CHRYSENE	0.027		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
DIBENZO(A,H)ANTHRACENE	0.0016		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	0.032		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
FLUORENE	0.00094		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.020		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	0.0013		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.012		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr
PYRENE	0.032		0.00076	LOD	0.00076	LOQ	mg/Kg	J+	Surr

Sample ID:H2-SS02-01		6/15/2016 10:00:00			Initial-BASE/			Dilution: 1	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0024		0.00077	LOD	0.00077	LOQ	mg/Kg	J+	Lcs

Sample ID:H2-SS02-02		6/15/2016 10:10:00			Initial-BASE/			Dilution: 1	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0010	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Ms, Lcs, Surr
2-METHYLNAPHTHALENE	0.0019		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	0.0012		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Surr
ACENAPHTHYLENE	0.00090		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Surr
ANTHRACENE	0.0024	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Ms, Surr
BENZ(A)ANTHRACENE	0.014	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Surr
BENZO(A)PYRENE	0.013	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Surr
BENZO(B)FLUORANTHENE	0.023	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Ms, Surr
BENZO(K)FLUORANTHENE	0.0053	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Surr
CHRYSENE	0.014	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Soil

Sample ID:H2-SS02-02		6/15/2016 10:10:00 Collected: AM			Initial-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIBENZO(A,H)ANTHRACENE	0.00078	UX	0.00078	LOD	0.00078	LOQ	mg/Kg	UJ	Ms
FLUORANTHENE	0.028	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Ms, Surr
FLUORENE	0.0013		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.0053	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Surr
NAPHTHALENE	0.0014		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.015	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Ms, Surr
PYRENE	0.023	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Surr

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID:H1-SS01-01		6/15/2016 8:40:00 Collected: AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.30	JQ	0.48	LOD	1.4	LOQ	mg/Kg	J	RI, Lcs

Sample ID:H1-SS01-02		6/15/2016 8:50:00 Collected: AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.24	JQ	0.45	LOD	1.3	LOQ	mg/Kg	J	RI, Lcs

Sample ID:H1-SS02-01		6/15/2016 9:00:00 Collected: AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.28	JQ	0.46	LOD	1.4	LOQ	mg/Kg	J	RI, Lcs

Sample ID:H1-SS02-02		6/15/2016 9:05:00 Collected: AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.40	UQ	0.40	LOD	1.2	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Soil						

Sample ID: H2-SS01-01		Collected: 6/15/2016 9:40:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.36	UQ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H2-SS01-02		Collected: 6/15/2016 9:50:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.37	UY	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H2-SS02-01		Collected: 6/15/2016 10:00:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.37	UY	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	0.41	UQX	0.41	LOD	1.2	LOQ	mg/Kg	UJ	Lcs

Sample ID: H2-SS02-02		Collected: 6/15/2016 10:10:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,6-DINITROTOLUENE	0.020	UX	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Ms
3,3-DICHLOROBENZIDINE	0.81	UX	0.81	LOD	1.2	LOQ	mg/Kg	UJ	Ms
3-NITROANILINE	0.020	UYX	0.020	LOD	0.39	LOQ	mg/Kg	UJ	Ms
4-BROMOPHENYL PHENYL ETHER	0.10	UX	0.10	LOD	0.24	LOQ	mg/Kg	UJ	Ms
4-CHLOROPHENYL PHENYL ETHER	0.020	UX	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Ms
4-NITROANILINE	0.10	UYX	0.10	LOD	0.39	LOQ	mg/Kg	UJ	Ms
BIS(2-ETHYLHEXYL) PHTHALATE	0.041	UX	0.041	LOD	0.19	LOQ	mg/Kg	UJ	Ms
Butyl benzyl phthalate	0.041	UX	0.041	LOD	0.19	LOQ	mg/Kg	UJ	Ms
CARBAZOLE	0.020	UX	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Ms
DIETHYL PHTHALATE	0.020	UX	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Ms
DIMETHYL PHTHALATE	0.020	UX	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Ms
DI-N-BUTYL PHTHALATE	0.041	UX	0.041	LOD	0.19	LOQ	mg/Kg	UJ	Ms
HEXACHLOROBENZENE	0.020	UX	0.020	LOD	0.19	LOQ	mg/Kg	UJ	Ms

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

<i>Method Category:</i>	SVOA		
<i>Method:</i>	8270D-MOD	<i>Matrix:</i>	Soil

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606601

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40326	7/5/2016 12:02:36 PM	POTASSIUM	8.6 mg/Kg	H2-SS02-02
MB-40445	7/21/2016 2:41:09 PM	SODIUM	2.1 mg/Kg	H1-SS02-01 H1-SS02-02

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H2-SS01-01 (Initial)	TETRACHLORO-M-XYLENE	43	44.00-130.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H1-SS01-02 (Initial)	Nitrobenzene-d5	130	44.00-125.00	All Base/Neutral Target Analytes	J+(all detects)
H1-SS02-01 (Initial)	2-FLUOROBIPHENYL	117	46.00-115.00	All Base/Neutral Target Analytes	J+(all detects)
	Nitrobenzene-d5	133	44.00-125.00		
	Terphenyl-d14	139	58.00-133.00		
H2-SS01-02 (Initial)	2-FLUOROBIPHENYL	122	46.00-115.00	All Base/Neutral Target Analytes	J+(all detects)
	Nitrobenzene-d5	138	44.00-125.00		
H2-SS02-02 (Initial)	Nitrobenzene-d5	133	44.00-125.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H1-SS01-01 (Initial)	Terphenyl-d14	51.4	54.00-127.00	No Affected Compounds	
H1-SS02-01 (Initial)	Terphenyl-d14	53	54.00-127.00	No Affected Compounds	
H2-SS01-01 (Initial)	Terphenyl-d14	53.4	54.00-127.00	No Affected Compounds	
H2-SS02-02 (Initial)	Terphenyl-d14	49.7	54.00-127.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
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H2-SS02-02MSD
(H2-SS02-02)

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
	1,2,4-TRICHLOROENZENE 1,2-DICHLOROENZENE 1,3-DICHLOROENZENE 1,4-DICHLOROENZENE 2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL 2,4-DICHLOROPHENOL 2,4-Dimethyl phenol 2,4-DINITROPHENOL 2,4-DINITROTOLUENE 2-CHLORONAPHTHALENE 2-CHLOROPHENOL 2-Methylphenol (o-Cresol) 2-NITROANILINE 2-NITROPHENOL 3/4-Methylphenol [m/p-Cresol] 4,6-DINITRO-2-METHYLPHENOL 4-CHLORO-3-METHYLPHENOL 4-Chloroaniline [p-Chloroaniline] 4-NITROPHENOL BENZOIC ACID BENZYL ALCOHOL bis(2-chloroethoxy) methane BIS(2-CHLOROETHYL) ETHER BIS(2-CHLOROISOPROPYL)ETHE DIBENZOFURAN DI-N-OCTYL PHTHALATE HEXACHLOROBUTADIENE HEXACHLOROETHANE ISOPHORONE NITROBENZENE N-NITROSODIMETHYLAMINE N-Nitrosodi-n-propylamine N-NITROSODIPHENYLAMINE PENTACHLOROPHENOL PHENOL						

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
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34.00-118.00
 33.00-117.00
 30.00-115.00
 31.00-115.00
 41.00-124.00
 39.00-126.00
 40.00-122.00
 30.00-127.00
 50.00-130.00
 48.00-126.00
 41.00-114.00
 34.00-121.00
 32.00-122.00
 44.00-127.00
 36.00-123.00
 34.00-119.00
 29.00-132.00
 45.00-122.00
 17.00-106.00
 30.00-132.00
 40.00-117.00
 29.00-122.00
 36.00-121.00
 31.00-120.00
 33.00-131.00
 44.00-120.00
 45.00-140.00
 32.00-123.00
 28.00-117.00
 30.00-122.00
 34.00-122.00
 23.00-120.00
 36.00-120.00
 38.00-127.00
 25.00-133.00
 34.00-121.00

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
					44.24 (25.00)		
					44.99 (25.00)		
					47.12 (25.00)		
					45.14 (25.00)		
					49.53 (25.00)		
					52.08 (25.00)		
					48.8 (25.00)		
					54.29 (25.00)		
					41.91 (25.00)		
					52.67 (25.00)		
					47.62 (25.00)		
					49.45 (25.00)		
					49.01 (25.00)		
					52.25 (25.00)		
					45.73 (25.00)		
					54.25 (25.00)		
					51.42 (25.00)		
					49.83 (25.00)		
					30.63 (25.00)		
					48.5 (25.00)		
					55.43 (25.00)		
					50.85 (25.00)		
					44.81 (25.00)		
					46.38 (25.00)		
					47.56 (25.00)		
					47.94 (25.00)		
					51.18 (25.00)		
					47.17 (25.00)		
					50.13 (25.00)		
					47.04 (25.00)		
					44.23 (25.00)		
					43.26 (25.00)		
					53.32 (25.00)		
					45.92 (25.00)		
					48.55 (25.00)		

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
						1,2,4-TRICHLOROENZENE 1,2-DICHLOROENZENE 1,3-DICHLOROENZENE 1,4-DICHLOROENZENE 2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL 2,4-DICHLOROPHENOL 2,4-Dimethyl phenol 2,4-DINITROPHENOL 2,4-DINITROTOLUENE 2-CHLORONAPHTHALENE 2-CHLOROPHENOL 2-Methylphenol (o-Cresol) 2-NITROANILINE 2-NITROPHENOL 3/4-Methylphenol [m/p-Cresol] 4,6-DINITRO-2-METHYLPHENOL 4-CHLORO-3-METHYLPHENOL 4-Chloroaniline [p-Chloroaniline] 4-NITROPHENOL BENZOIC ACID BENZYL ALCOHOL bis(2-chloroethoxy) methane BIS(2-CHLOROETHYL) ETHER BIS(2-CHLOROISOPROPYL)ETH DIBENZOFURAN DI-N-OCTYL PHTHALATE HEXACHLOROBUTADIENE HEXACHLOROETHANE ISOPHORONE NITROBENZENE N-NITROSODIMETHYLAMINE N-Nitrosodi-n-propylamine N-NITROSODIPHENYLAMINE PENTACHLOROPHENOL PHENOL	

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
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J (all detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H2-SS02-02MS H2-SS02-02MSD (H2-SS02-02)	2,6-DINITROTOLUENE	-	44.4	46.00-124.00	52.89	2,6-DINITROTOLUENE	J(all detects) UJ(all non-detects)
	3-NITROANILINE	-	29.6	33.00-119.00	(25.00)	3-NITROANILINE	
	4-BROMOPHENYL PHENYL ETHER	-	44.5	46.00-124.00	33.33	4-BROMOPHENYL PHENYL ETHER	
	4-CHLOROPHENYL PHENYL ETHER	-	44.7	45.00-121.00	(25.00)	4-CHLOROPHENYL PHENYL ETHER	
	4-NITROANILINE	40.4	30.5	50.00-130.00	46.75	4-NITROANILINE	
	BIS(2-ETHYLHEXYL) PHTHALATE	-	44.2	51.00-133.00	(25.00)	BIS(2-ETHYLHEXYL) PHTHALATE	
	Butyl benzyl phthalate	-	43.5	48.00-132.00	49.85	Butyl benzyl phthalate	
	CARBAZOLE	-	46.9	50.00-123.00	(25.00)	CARBAZOLE	
	DIETHYL PHTHALATE	-	43.1	50.00-124.00	28.54	DIETHYL PHTHALATE	
	DIMETHYL PHTHALATE	-	42	48.00-124.00	(25.00)	DIMETHYL PHTHALATE	
	DI-N-BUTYL PHTHALATE	-	42.4	51.00-128.00	52.16	DI-N-BUTYL PHTHALATE	
	HEXACHLOROBENZENE	-	44.3	45.00-122.00	(25.00)	HEXACHLOROBENZENE	
					53.06 (25.00)		
					46.13 (25.00)		
				49.25 (25.00)			
				48.97 (25.00)			
				47.48 (25.00)			
				46.8 (25.00)			
H2-SS02-02MS H2-SS02-02MSD (H2-SS02-02)	3,3'-DICHLOROBENZIDINE	0	0	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J-(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H2-SS02-02MSD (H2-SS02-02)	BENZ(A)ANTHRACENE	-	200	54.00-122.00	49.49	BENZ(A)ANTHRACENE	J(all detects)
	BENZO(A)PYRENE	-	141	50.00-125.00	(25.00)	BENZO(A)PYRENE	
	BENZO(K)FLUORANTHENE	-	142	56.00-123.00	36.79	BENZO(K)FLUORANTHENE	
	CHRYSENE	-	152	57.00-118.00	(25.00)	CHRYSENE	
	PYRENE	-	232	55.00-117.00	41.37	PYRENE	
					32.43 (25.00)		
					56.18 (25.00)		
H2-SS02-02MS H2-SS02-02MSD (H2-SS02-02)	DIBENZO(A,H)ANTHRACENE	-	8.49	50.00-129.00	156.89	DIBENZO(A,H)ANTHRACENE	J(all detects) UJ(all non-detects)
	FLUORANTHENE	52.5	245	55.00-119.00	(25.00)	FLUORANTHENE	
					58.11 (25.00)		
H2-SS02-02MS (H2-SS02-02)	INDENO(1,2,3-CD)PYRENE	41	-	49.00-130.00	-	INDENO(1,2,3-CD)PYRENE	J-(all detects) UJ(all non-detects)
H2-SS02-02MS H2-SS02-02MSD (H2-SS02-02)	1-METHYLNAPHTHALENE	115	117	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)
	ANTHRACENE	-	121	50.00-114.00	-	ANTHRACENE	
	BENZO(B)FLUORANTHENE	-	175	53.00-128.00	-	BENZO(B)FLUORANTHENE	
	PHENANTHRENE	-	124	49.00-113.00	-	PHENANTHRENE	

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H2-SS02-02MS (Dry) H2-SS02-02MSD (Dry) (H2-SS02-02)	ALUMINUM	16900	14300	74.00-119.00	-	ALUMINUM	J+(all detects)
	BARIUM	152	134	83.00-113.00	-	BARIUM	
	CALCIUM	229	181	81.00-116.00	-	CALCIUM	
	CHROMIUM	117	123	85.00-113.00	-	CHROMIUM	
	COPPER	162	146	81.00-117.00	-	COPPER	
	IRON	1820	1250	81.00-118.00	-	IRON	
	MAGNESIUM	453	289	78.00-115.00	-	MAGNESIUM	
	MANGANESE	414	303	84.00-114.00	-	MANGANESE	
	POTASSIUM	328	244	81.00-116.00	-	POTASSIUM	
	SODIUM	129	122	83.00-118.00	-	SODIUM	
	VANADIUM	123	120	82.00-114.00	-	VANADIUM	
	ZINC	214	208	82.00-113.00	-	ZINC	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40244 (H1-SS01-01 H1-SS01-02 H1-SS02-01 H1-SS02-02 H2-SS01-01 H2-SS01-02 H2-SS02-01 H2-SS02-02)	BENZOIC ACID	0	-	40.00-117.00	-	BENZOIC ACID	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40280 (H1-SS01-01 H1-SS01-02 H1-SS02-01 H1-SS02-02 H2-SS01-01 H2-SS01-02 H2-SS02-01 H2-SS02-02)	1-METHYLNAPHTHALENE	115	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H1-SS01-01	ANTIMONY	J	0.78	0.97	LOQ	mg/Kg	J (all detects)
	ARSENIC	J	0.90	1.9	LOQ	mg/Kg	
	BERYLLIUM	J	0.063	0.24	LOQ	mg/Kg	
	CADMIUM	J	0.066	0.24	LOQ	mg/Kg	
	COBALT	J	0.78	0.97	LOQ	mg/Kg	
	LEAD	J	2.5	4.8	LOQ	mg/Kg	
	NICKEL	J	2.4	4.8	LOQ	mg/Kg	
H1-SS01-02	BERYLLIUM	J	0.025	0.22	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.045	0.22	LOQ	mg/Kg	
	LEAD	J	2.9	4.4	LOQ	mg/Kg	
	NICKEL	J	2.4	4.4	LOQ	mg/Kg	
H1-SS02-01	ARSENIC	J	0.86	1.8	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.6	4.5	LOQ	mg/Kg	
	NICKEL	J	2.8	4.5	LOQ	mg/Kg	
	SILVER	J	0.63	0.90	LOQ	mg/Kg	
H1-SS02-02	LEAD	J	3.3	3.9	LOQ	mg/Kg	J (all detects)
	SILVER	J	0.31	0.77	LOQ	mg/Kg	
H2-SS01-01	ARSENIC	J	1.1	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.083	0.18	LOQ	mg/Kg	
	CADMIUM	J	0.13	0.18	LOQ	mg/Kg	
H2-SS01-02	ARSENIC	J	0.84	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.080	0.18	LOQ	mg/Kg	
	CADMIUM	J	0.090	0.18	LOQ	mg/Kg	
H2-SS02-01	BERYLLIUM	J	0.14	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.16	0.19	LOQ	mg/Kg	
H2-SS02-02	CADMIUM	J	0.14	0.19	LOQ	mg/Kg	J (all detects)

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H1-SS01-01	THALLIUM	J	0.068	0.19	LOQ	mg/Kg	J (all detects)
H1-SS01-02	THALLIUM	J	0.050	0.18	LOQ	mg/Kg	J (all detects)
H1-SS02-02	THALLIUM	JG	0.057	0.16	LOQ	mg/Kg	J (all detects)
H2-SS01-01	THALLIUM	J	0.082	0.14	LOQ	mg/Kg	J (all detects)
H2-SS01-02	THALLIUM	J	0.078	0.15	LOQ	mg/Kg	J (all detects)
H2-SS02-01	THALLIUM	J	0.12	0.15	LOQ	mg/Kg	J (all detects)
H2-SS02-02	THALLIUM	JG	0.13	0.16	LOQ	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606601

Laboratory: RTILABS

EDD Filename: EDD_1606601_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H1-SS01-01	BENZOIC ACID	JQ	0.30	1.4	LOQ	mg/Kg	J (all detects)
H1-SS01-02	BENZOIC ACID	JQ	0.24	1.3	LOQ	mg/Kg	J (all detects)
H1-SS02-01	BENZOIC ACID	JQ	0.28	1.4	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606603		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	8 soil samples for a project-specific list of SVOCs STAR, SVOCs, PCBs, lead, and metals		
Data Reviewer:	Devon Chicoine AECOM/Arlington, VA		
Completed:	August 29, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606603. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: WDS-SB20-06	Collected: 6/15/2016 9:15:00 AM			Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.027	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI
LEAD	3.9	J	0.79	LOD	4.0	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6010C-STAR	Matrix:	Soil						

Sample ID: 2010-SB01-04	Collected: 6/15/2016 9:00:00 AM			Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3.5	J	0.76	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: 2010-SB02-05	Collected: 6/15/2016 8:45:00 AM			Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	6.2		0.84	LOD	4.2	LOQ	mg/Kg	J	Fd

Sample ID: 2010-SB02-05 DUP	Collected: 6/15/2016 8:45:00 AM			Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	16		0.82	LOD	4.1	LOQ	mg/Kg	J	Fd

Method Category:	SVOA								
Method:	8270D-MOD	Matrix:	Soil						

Sample ID: WDS-SB20-06	Collected: 6/15/2016 9:15:00 AM			Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TRICHLOROPHENOL	0.039	U	0.039	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4,6-TRICHLOROPHENOL	0.039	U	0.039	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-DICHLOROPHENOL	0.098	U	0.098	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-Dimethyl phenol	0.098	U	0.098	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2,4-DINITROPHENOL	0.20	U	0.20	LOD	0.97	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8270D-MOD	Matrix:	Soil						

Sample ID: WDS-SB20-06		6/15/2016 9:15:00			Analysis Type: Initial-ACID			Dilution: 1	
Collected: AM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLOROPHENOL	0.098	U	0.098	LOD	0.19	LOQ	mg/Kg	UJ	Surr
2-NITROPHENOL	0.098	U	0.098	LOD	0.19	LOQ	mg/Kg	UJ	Surr
4,6-DINITRO-2-METHYLPHENOL	0.098	U	0.098	LOD	0.38	LOQ	mg/Kg	UJ	Surr
4-CHLORO-3-METHYLPHENOL	0.039	U	0.039	LOD	0.19	LOQ	mg/Kg	UJ	Surr
4-NITROPHENOL	0.39	U	0.39	LOD	0.97	LOQ	mg/Kg	UJ	Surr
BENZOIC ACID	0.39	UY	0.39	LOD	1.2	LOQ	mg/Kg	UJ	Lcs, Surr
PENTACHLOROPHENOL	0.098	UY	0.098	LOD	0.19	LOQ	mg/Kg	UJ	Surr
PHENOL	0.098	U	0.098	LOD	0.19	LOQ	mg/Kg	UJ	Surr

Method Category:	SVOA								
Method:	8270D-SIM-STAR	Matrix:	Soil						

Sample ID: STB-SB02-06		6/15/2016 9:37:00			Initial-BASE/			Dilution: 1	
Collected: AM		Analysis Type: NEUTRAL							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.0050		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
BENZO(A)PYRENE	0.0048		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
BENZO(B)FLUORANTHENE	0.0083		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
BENZO(G,H,I)PERYLENE	0.0036		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
BENZO(K)FLUORANTHENE	0.0028		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
CHRYSENE	0.0060		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
FLUORANTHENE	0.014		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
INDENO(1,2,3-CD)PYRENE	0.0036		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
PHENANTHRENE	0.0060		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr
PYRENE	0.010		0.00080	LOD	0.00080	LOQ	mg/Kg	J+	Surr

Sample ID: STB-SB04-06		6/15/2016 10:05:00			Initial-BASE/			Dilution: 1	
Collected: AM		Analysis Type: NEUTRAL							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Fd
BENZ(A)ANTHRACENE	0.0014		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.0011		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd

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Data Qualifier Summary

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID: STB-SB04-06		6/15/2016 10:05:00			Initial-BASE/			Dilution: 1		
		Collected: AM	Analysis Type: NEUTRAL							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZO(B)FLUORANTHENE	0.0023		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd	
BENZO(G,H,I)PERYLENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Fd	
BENZO(K)FLUORANTHENE	0.00083		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd	
CHRYSENE	0.0016		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd	
FLUORANTHENE	0.0035		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd	
INDENO(1,2,3-CD)PYRENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Fd	
PHENANTHRENE	0.0018		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd	
PYRENE	0.0030		0.00077	LOD	0.00077	LOQ	mg/Kg	J	Fd	

Sample ID: STB-SB04-06 DUP		6/15/2016 10:05:00			Initial-BASE/			Dilution: 1		
		Collected: AM	Analysis Type: NEUTRAL							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACENAPHTHENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr	
ACENAPHTHYLENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr	
ANTHRACENE	0.0023		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
BENZ(A)ANTHRACENE	0.010		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
BENZO(A)PYRENE	0.0067		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
BENZO(B)FLUORANTHENE	0.010		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
BENZO(G,H,I)PERYLENE	0.0036		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
BENZO(K)FLUORANTHENE	0.0029		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
CHRYSENE	0.0085		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
DIBENZO(A,H)ANTHRACENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr	
FLUORANTHENE	0.022		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
FLUORENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr	
INDENO(1,2,3-CD)PYRENE	0.0036		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
PHENANTHRENE	0.0083		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	
PYRENE	0.017		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Surr, Fd	

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

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Data Review Summary

Lab Reporting Batch ID: 1606603

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40481	8/4/2016 11:23:38 AM	MANGANESE	0.37 mg/Kg	WDS-SB20-06

Project Name and Number: - USACE Project: USACE Project: USACE Project: USACE Project:

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB20-06 (Initial)	2,4,6-TRIBROMOPHENOL	32.7	39.00-132.00	All Acid Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROPHENOL	34.9	35.00-115.00		
	Terphenyl-d14	53.1	54.00-127.00		

Method: 8270D-SIM-STAR
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
STB-SB02-06 (Initial)	2-FLUOROBIPHENYL	122	46.00-115.00	All Base/Neutral Target Analytes	J+ (all detects)
	Nitrobenzene-d5	140	44.00-125.00		
	Terphenyl-d14	135	58.00-133.00		
STB-SB04-06 DUP (Initial)	Terphenyl-d14	57.6	58.00-133.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40244 (WDS-SB20-06)	BENZOIC ACID	0	-	40.00-117.00	-	BENZOIC ACID	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40280 (STB-SB01-05 STB-SB02-06 STB-SB03-06 STB-SB04-06 STB-SB04-06 DUP STB-SS05-01 STB-SS06-01 STB-SS07-01 WDS-SB20-06)	1-METHYLNAPHTHALENE	115	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C-STAR
Matrix: Soil

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	2010-SB02-05 (Dry)	2010-SB02-05 DUP (Dry)			
LEAD	6.2	16	88	50.00	J (all detects) UJ (all non-detects)

Method: 8270D-SIM-STAR
Matrix: Soil

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	STB-SB04-06	STB-SB04-06 DUP			
ANTHRACENE	0.00077 U	0.0023	200	50.00	J(all detects) UJ(all non-detects)
BENZ(A)ANTHRACENE	0.0014	0.010	151	50.00	
BENZO(A)PYRENE	0.0011	0.0067	144	50.00	
BENZO(B)FLUORANTHENE	0.0023	0.010	125	50.00	
BENZO(G,H,I)PERYLENE	0.00077 U	0.0036	200	50.00	
BENZO(K)FLUORANTHENE	0.00083	0.0029	111	50.00	
CHRYSENE	0.0016	0.0085	137	50.00	
FLUORANTHENE	0.0035	0.022	145	50.00	
INDENO(1,2,3-CD)PYRENE	0.00077 U	0.0036	200	50.00	
PHENANTHRENE	0.0018	0.0083	129	50.00	
PYRENE	0.0030	0.017	140	50.00	

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606603

Laboratory: RTILABS

EDD Filename: EDD_1606603_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB20-06	CADMIUM	J	0.027	0.20	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.9	4.0	LOQ	mg/Kg	

Method: 6010C-STAR
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
2010-SB01-04	LEAD	J	3.5	3.8	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606605		
Date(s) of Collection:	June 15 th , 2016		
Number/Type Samples & Analyses:	16 soil samples for a project-specific list of SVOCs by SIM and metals		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 26 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606605. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✗ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✗ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: BG04-SB01-05		Collected: 6/15/2016 11:40:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	4.0	J	0.81	LOD	4.1	LOQ	mg/Kg	J	RI

Sample ID: BG04-SB01-10		Collected: 6/15/2016 11:45:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.18	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.067	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: BG04-SB02-05		Collected: 6/15/2016 12:20:00 PM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2500		38	LOD	380	LOQ	mg/Kg	J+	Ms

Sample ID: BG04-SB02-05		Collected: 6/15/2016 12:20:00 PM			Analysis Type: Dilution-2			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	17000		150	LOD	380	LOQ	mg/Kg	J+	Ms
IRON	19000		380	LOD	1100	LOQ	mg/Kg	J+	Ms

Sample ID: BG04-SB02-05		Collected: 6/15/2016 12:20:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	38	X	3.8	LOD	7.5	LOQ	mg/Kg	J+	Ms
BERYLLIUM	0.17	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.063	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CALCIUM	620	X	7.5	LOD	38	LOQ	mg/Kg	J+	Ms
COPPER	38	X	0.75	LOD	3.8	LOQ	mg/Kg	J+	Ms
MANGANESE	160	X	0.19	LOD	0.75	LOQ	mg/Kg	J+	Ms
NICKEL	10	X	0.75	LOD	3.8	LOQ	mg/Kg	J+	Ms
POTASSIUM	1100	X	7.5	LOD	15	LOQ	mg/Kg	J+	Ms
SELENIUM	1.1	UX	1.1	LOD	1.5	LOQ	mg/Kg	UJ	Ms, Ms
SODIUM	91	X	3.8	LOD	38	LOQ	mg/Kg	J+	Ms

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

6/15/2016 12:20:00									
Sample ID: BG04-SB02-05			Collected: PM		Analysis Type: Reanalysis-1			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	19	X	0.30	LOD	0.38	LOQ	mg/Kg	J+	Ms
ZINC	28	X	0.38	LOD	3.8	LOQ	mg/Kg	J+	Ms

6/15/2016 12:25:00									
Sample ID: BG04-SB02-10			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.070	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI

6/15/2016 12:05:00									
Sample ID: BG04-SB03-05			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.060	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI

6/15/2016 12:10:00									
Sample ID: BG04-SB03-10			Collected: PM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.099	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.036	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI

6/15/2016 11:15:00									
Sample ID: BG04-SB04-05			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.037	U	0.037	LOD	0.19	LOQ	mg/Kg	UJ	Fd
CADMIUM	0.032	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI

6/15/2016 11:15:00									
Sample ID: BG04-SB04-05 DUP			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.039	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.037	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	3.4	J	0.75	LOD	3.8	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: BG04-SB04-10		6/15/2016 11:20:00			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ARSENIC	0.74	J	0.70	LOD	1.4	LOQ	mg/Kg	J	RI	
BERYLLIUM	0.063	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI	
LEAD	0.87	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI	
NICKEL	2.2	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SB04-10		6/15/2016 11:20:00			Analysis Type: Reanalysis-1			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ZINC	5.2		0.35	LOD	3.5	LOQ	mg/Kg	U	Mb	

Sample ID: BG04-SS01-01		6/15/2016 11:35:00			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BERYLLIUM	0.19	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI	
CADMIUM	0.046	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS02-01		6/15/2016 12:15:00			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BERYLLIUM	0.086	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI	
CADMIUM	0.031	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS03-01		6/15/2016 12:00:00			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
CADMIUM	0.034	J	0.041	LOD	0.20	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS04-01		6/15/2016 11:10:00			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BERYLLIUM	0.18	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: BG04-SS06-01		Collected: 6/15/2016 11:25:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.17	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI
CADMIUM	0.059	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI

Sample ID: BG04-SS07-01		Collected: 6/15/2016 11:55:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.14	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI
CADMIUM	0.091	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:		Soil					

Sample ID: BG04-SB01-05		Collected: 6/15/2016 11:40:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.14	J	0.040	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: BG04-SB02-05		Collected: 6/15/2016 12:20:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.096	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: BG04-SB04-05		Collected: 6/15/2016 11:15:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.11	J	0.039	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: BG04-SB04-05 DUP		Collected: 6/15/2016 11:15:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.081	J	0.036	LOD	0.15	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL			Matrix: Soil						

Sample ID: BG04-SB04-10		Collected: 6/15/2016 11:20:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.053	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS01-01		Collected: 6/15/2016 11:35:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.12	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS02-01		Collected: 6/15/2016 12:15:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.15	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS03-01		Collected: 6/15/2016 12:00:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.11	J	0.041	LOD	0.17	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS04-01		Collected: 6/15/2016 11:10:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.12	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS05-01		Collected: 6/15/2016 11:20:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.13	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: BG04-SS06-01		Collected: 6/15/2016 11:25:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.11	J	0.042	LOD	0.17	LOQ	mg/Kg	J	RI	

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: BG04-SS07-01 Collected: 6/15/2016 11:55:00 AM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.098	J	0.043	LOD	0.17	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation

* denotes a non-reportable result

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Data Review Summary

Lab Reporting Batch ID: 1606605

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40430	7/29/2016 11:36:37 AM	COPPER ZINC	0.77 mg/Kg 1.4 mg/Kg	BG04-SB04-10 BG04-SS01-01 BG04-SS02-01 BG04-SS03-01 BG04-SS04-01 BG04-SS05-01 BG04-SS06-01 BG04-SS07-01

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
BG04-SB04-10(Reanalysis-1)	ZINC	5.2 mg/Kg	5.2U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
BG04-SS05-01 (Initial)	Terphenyl-d14	57.3	58.00-133.00	All Base/Neutral Target Analytes	J- (all detects) UJ (all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG04-SB02-05MS BG04-SB02-05MSD (BG04-SB02-05)	1-METHYLNAPHTHALENE	129	216	43.00-111.00	50.5 (25.00)	1-METHYLNAPHTHALENE	J (all detects)

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG04-SB02-05MS (Dry) BG04-SB02-05MSD (Dry) (BG04-SB02-05)	SELENIUM	67.5	52.8	78.00-111.00	25.16 (20.00)	SELENIUM	J(all detects) UJ(all non-detects)
BG04-SB02-05MS (Dry) BG04-SB02-05MSD (Dry) (BG04-SB02-05)	ALUMINUM BARIUM CALCIUM CHROMIUM COPPER IRON MAGNESIUM MANGANESE NICKEL POTASSIUM SODIUM ZINC	9960 - 218 116 171 589 207 186 126 158 120 205	16700 125 155 - 163 1210 - - - - - 154	74.00-119.00 83.00-113.00 81.00-116.00 85.00-113.00 81.00-117.00 81.00-118.00 78.00-115.00 84.00-114.00 83.00-113.00 81.00-116.00 83.00-118.00 82.00-113.00	- - - - - - - - - - - -	ALUMINUM BARIUM CALCIUM CHROMIUM COPPER IRON MAGNESIUM MANGANESE NICKEL POTASSIUM SODIUM ZINC	J+(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCS-40290 (BG04-SB01-05 BG04-SB01-10 BG04-SB02-05 BG04-SB02-10 BG04-SB03-05 BG04-SB03-10 BG04-SB04-05 BG04-SB04-05 DUP BG04-SB04-10 BG04-SS01-01 BG04-SS02-01 BG04-SS03-01 BG04-SS04-01 BG04-SS05-01)	1-METHYLNAPHTHALENE	138	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+ (all detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C

Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG04-SB04-05 (Dry)	BG04-SB04-05 DUP (Dry)			
BERYLLIUM	0.19 U	0.039	200	50.00	J (all detects) UJ (all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG04-SB01-05	LEAD	J	4.0	4.1	LOQ	mg/Kg	J (all detects)
BG04-SB01-10	BERYLLIUM	J	0.18	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.067	0.19	LOQ	mg/Kg	
BG04-SB02-05	BERYLLIUM	J	0.17	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.063	0.19	LOQ	mg/Kg	
BG04-SB02-10	CADMIUM	J	0.070	0.20	LOQ	mg/Kg	J (all detects)
BG04-SB03-05	CADMIUM	J	0.060	0.20	LOQ	mg/Kg	J (all detects)
BG04-SB03-10	BERYLLIUM	J	0.099	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.036	0.19	LOQ	mg/Kg	
BG04-SB04-05	CADMIUM	J	0.032	0.19	LOQ	mg/Kg	J (all detects)
BG04-SB04-05 DUP	BERYLLIUM	J	0.039	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.037	0.19	LOQ	mg/Kg	
	LEAD	J	3.4	3.8	LOQ	mg/Kg	
BG04-SB04-10	ARSENIC	J	0.74	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.063	0.18	LOQ	mg/Kg	
	LEAD	J	0.87	3.5	LOQ	mg/Kg	
	NICKEL	J	2.2	3.5	LOQ	mg/Kg	
BG04-SS01-01	BERYLLIUM	J	0.19	0.20	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.046	0.20	LOQ	mg/Kg	
BG04-SS02-01	BERYLLIUM	J	0.086	0.20	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.031	0.20	LOQ	mg/Kg	
BG04-SS03-01	CADMIUM	J	0.034	0.20	LOQ	mg/Kg	J (all detects)
BG04-SS04-01	BERYLLIUM	J	0.18	0.20	LOQ	mg/Kg	J (all detects)
BG04-SS06-01	BERYLLIUM	J	0.17	0.21	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.059	0.21	LOQ	mg/Kg	
BG04-SS07-01	BERYLLIUM	J	0.14	0.21	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.091	0.21	LOQ	mg/Kg	

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG04-SB01-05	THALLIUM	J	0.14	0.16	LOQ	mg/Kg	J (all detects)
BG04-SB02-05	THALLIUM	J	0.096	0.16	LOQ	mg/Kg	J (all detects)
BG04-SB04-05	THALLIUM	J	0.11	0.15	LOQ	mg/Kg	J (all detects)
BG04-SB04-05 DUP	THALLIUM	J	0.081	0.15	LOQ	mg/Kg	J (all detects)
BG04-SB04-10	THALLIUM	J	0.053	0.14	LOQ	mg/Kg	J (all detects)
BG04-SS01-01	THALLIUM	J	0.12	0.16	LOQ	mg/Kg	J (all detects)
BG04-SS02-01	THALLIUM	J	0.15	0.16	LOQ	mg/Kg	J (all detects)
BG04-SS03-01	THALLIUM	J	0.11	0.17	LOQ	mg/Kg	J (all detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606605

Laboratory: RTILABS

EDD Filename: EDD_1606605_SEDD_2a_v1_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-TL

Matrix: Soil

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
BG04-SS04-01	THALLIUM	J	0.12	0.15	LOQ	mg/Kg	J (all detects)
BG04-SS05-01	THALLIUM	J	0.13	0.16	LOQ	mg/Kg	J (all detects)
BG04-SS06-01	THALLIUM	J	0.11	0.17	LOQ	mg/Kg	J (all detects)
BG04-SS07-01	THALLIUM	J	0.098	0.17	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606606		
Date(s) of Collection:	June 15 th , 2016		
Number/Type Samples & Analyses:	16 soil samples for a project-specific list of PAHs and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 31, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606606. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✓ Laboratory control sample (LCS) recoveries
- ✗ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✗ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix: Soil							

Sample ID:H15-SB01-25		6/15/2016 3:30:00			Analysis Type: Initial			Dilution: 1	
Collected: PM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.0	J	0.70	LOD	1.4	LOQ	mg/Kg	J	RI
BERYLLIUM	0.046	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
CADMIUM	0.025	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
LEAD	1.9	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI

Sample ID:H15-SB02-22		6/15/2016 2:15:00			Analysis Type: Dilution-1			Dilution: 10	
Collected: PM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	12000	X	36	LOD	110	LOQ	mg/Kg	J-	Ms
MAGNESIUM	2400	X	36	LOD	360	LOQ	mg/Kg	J-	Ms

Sample ID:H15-SB02-22		6/15/2016 2:15:00			Analysis Type: Dilution-2			Dilution: 100	
Collected: PM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8600		140	LOD	360	LOQ	mg/Kg	J+	Ms

Sample ID:H15-SB02-22		6/15/2016 2:15:00			Analysis Type: Initial			Dilution: 1	
Collected: PM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.072	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.6	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI
MANGANESE	170		0.18	LOD	0.72	LOQ	mg/Kg	J-	Ms
POTASSIUM	1500		7.2	LOD	14	LOQ	mg/Kg	J+	Ms
SELENIUM	1.1	U	1.1	LOD	1.4	LOQ	mg/Kg	UJ	Ms
ZINC	17		0.36	LOD	3.6	LOQ	mg/Kg	J-	Ms

Sample ID:H15-SB03-18		6/15/2016 1:45:00			Analysis Type: Initial			Dilution: 1	
Collected: PM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.033	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.5	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: H15-SS01-01		Collected: 6/15/2016 3:25:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.3	J	0.75	LOD	1.5	LOQ	mg/Kg	J	RI

Sample ID: H15-SS02-01		Collected: 6/15/2016 2:10:00 PM			Analysis Type: Initial2			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.17	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.049	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

Sample ID: H15-SS03-01		Collected: 6/15/2016 1:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.11	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.038	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:		Soil					

Sample ID: H15-SB01-25		Collected: 6/15/2016 3:30:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.076	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H15-SB03-18		Collected: 6/15/2016 1:45:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.11	J	0.036	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H15-SS01-01		Collected: 6/15/2016 3:25:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.070	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID:H15-SS03-01 Collected: 6/15/2016 1:40:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.065	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Soil						

Sample ID:H15-SS01-01 Collected: 6/15/2016 3:25:00 PM Analysis Type: Initial-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0024	Y	0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
2-METHYLNAPHTHALENE	0.0026		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
ACENAPHTHENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr
ACENAPHTHYLENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr
ANTHRACENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr
BENZ(A)ANTHRACENE	0.0039		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
BENZO(A)PYRENE	0.0041		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
BENZO(B)FLUORANTHENE	0.0062		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
BENZO(G,H,I)PERYLENE	0.0028		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
BENZO(K)FLUORANTHENE	0.0029		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
CHRYSENE	0.0045		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr
FLUORANTHENE	0.0092		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
FLUORENE	0.00076	U	0.00076	LOD	0.00076	LOQ	mg/Kg	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.0028		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
NAPHTHALENE	0.0020		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
PHENANTHRENE	0.0042		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr
PYRENE	0.0078		0.00076	LOD	0.00076	LOQ	mg/Kg	J-	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation

* denotes a non-reportable result

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Data Review Summary

Lab Reporting Batch ID: 1606606

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40481	8/4/2016 11:23:38 AM	MANGANESE	0.37 mg/Kg	H15-SB03-18

Project Name and Number: - USACE Project: USACE Project: USACE Project: USACE Project:

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H15-SS01-01 (Initial)	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	27 29.1 28.6	46.00-115.00 44.00-125.00 58.00-133.00	All Base/Neutral Target Analytes	J- (all detects) UJ (all non-detects)
H15-SS02-01 (Initial)	Terphenyl-d14	52.1	58.00-133.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H15-SB02-22MS (Dry) H15-SB02-22MSD (Dry) (H15-SB02-22)	IRON MAGNESIUM MANGANESE SELENIUM ZINC	55.7 - 50.8 73 78.5	-230 36.5 81.1 - 76	81.00-118.00 78.00-115.00 84.00-114.00 78.00-111.00 82.00-113.00	- - - - -	IRON MAGNESIUM MANGANESE SELENIUM ZINC	J- (all detects) UJ (all non-detects)
H15-SB02-22MS (Dry) H15-SB02-22MSD (Dry) (H15-SB02-22)	ALUMINUM POTASSIUM	4700 135	1420 -	74.00-119.00 81.00-116.00	- -	ALUMINUM POTASSIUM	J+(all detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: USACE Project:

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606606

Laboratory: RTILABS

EDD Filename: EDD_1606606_SEDD_2a_v2_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H15-SB01-25	ARSENIC	J	1.0	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.046	0.17	LOQ	mg/Kg	
	CADMIUM	J	0.025	0.17	LOQ	mg/Kg	
	LEAD	J	1.9	3.5	LOQ	mg/Kg	
H15-SB02-22	BERYLLIUM	J	0.072	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.6	3.6	LOQ	mg/Kg	
H15-SB03-18	CADMIUM	J	0.033	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.5	3.5	LOQ	mg/Kg	
H15-SS01-01	ARSENIC	J	1.3	1.5	LOQ	mg/Kg	J (all detects)
H15-SS02-01	BERYLLIUM	J	0.17	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.049	0.18	LOQ	mg/Kg	
H15-SS03-01	BERYLLIUM	J	0.11	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.038	0.18	LOQ	mg/Kg	

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H15-SB01-25	THALLIUM	J	0.076	0.14	LOQ	mg/Kg	J (all detects)
H15-SB03-18	THALLIUM	J	0.11	0.14	LOQ	mg/Kg	J (all detects)
H15-SS01-01	THALLIUM	J	0.070	0.15	LOQ	mg/Kg	J (all detects)
H15-SS03-01	THALLIUM	J	0.065	0.14	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606652		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	17 soil samples and 1 trip blank for a project-specific list of VOCs, SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 30, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606652. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- ✓ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

Sample 203-SB05-21 was analyzed by both 8260C and 8260C-ME methodologies due to some high concentrations during the 8260C analysis of three analytes; the three analytes are benzene, ethylbenzene, and xylenes (total). The result that are not being used for each method were manually qualified using 'NP' for not preferred.

Samples 203-SB05-05 and H17-SB01-05 for 1-Methylnaphthalene are considered estimated. (exceeded calibration and re-analyses was not performed)

The following table defines the data qualifiers assigned by ADR and/or during manual data review of the ADR output.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID:201-SB01-10		6/16/2016 9:15:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ARSENIC	1.3	J	0.70	LOD	1.4	LOQ	mg/Kg	J	RI		
CADMIUM	0.030	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI		
LEAD	1.1	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI		

Sample ID:201-SB01-25		6/16/2016 9:20:00		Collected: AM				Analysis Type: Dilution-1		Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
IRON	12000		34	LOD	100	LOQ	mg/Kg	J	Ms, Ms		
MANGANESE	270		1.7	LOD	6.7	LOQ	mg/Kg	J-	Ms		

Sample ID:201-SB01-25		6/16/2016 9:20:00		Collected: AM				Analysis Type: Dilution-2		Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ALUMINUM	6200		130	LOD	340	LOQ	mg/Kg	J-	Ms		

Sample ID:201-SB01-25		6/16/2016 9:20:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.014	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI		
CALCIUM	780	X	6.7	LOD	34	LOQ	mg/Kg	J+	Ms		
LEAD	0.97	J	0.67	LOD	3.4	LOQ	mg/Kg	J	RI		
MAGNESIUM	1500	X	3.4	LOD	34	LOQ	mg/Kg	J-	Ms		
POTASSIUM	910	X	6.7	LOD	13	LOQ	mg/Kg	J-	Ms		

Sample ID:203-SB01-10		6/16/2016 10:10:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.051	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI		
LEAD	1.7	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI		

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID:203-SB01-12		6/16/2016 10:45:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.11	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI		
CADMIUM	0.055	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI		
LEAD	2.2	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI		

Sample ID:203-SB02-02		6/16/2016 11:15:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.15	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI		
LEAD	2.3	J	0.69	LOD	3.4	LOQ	mg/Kg	J	RI		

Sample ID:203-SB03-04		6/16/2016 11:40:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.060	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI		
LEAD	1.8	J	0.68	LOD	3.4	LOQ	mg/Kg	J	RI		

Sample ID:203-SB03-05		6/16/2016 11:45:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BERYLLIUM	0.14	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI		
CADMIUM	0.031	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI		
LEAD	3.0	J	0.69	LOD	3.4	LOQ	mg/Kg	J	RI		

Sample ID:203-SB04-11		6/16/2016 10:55:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
LEAD	3.1	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI		

Sample ID:203-SB04-14		6/16/2016 11:10:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ARSENIC	1.1	J	0.67	LOD	1.3	LOQ	mg/Kg	J	RI		
BERYLLIUM	0.084	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI		

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: 203-SB04-14		Collected: 6/16/2016 11:10:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.023	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI
LEAD	2.8	J	0.67	LOD	3.4	LOQ	mg/Kg	J	RI

Sample ID: 203-SB05-05		Collected: 6/16/2016 11:45:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.11	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	12000		43	LOD	130	LOQ	mg/Kg	J	Ms, Ms

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM			Analysis Type: Dilution-2			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	10000		170	LOD	430	LOQ	mg/Kg	J	Ms, Ms

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.6	J	0.87	LOD	1.7	LOQ	mg/Kg	J	RI
BARIUM	42	X	4.3	LOD	8.7	LOQ	mg/Kg	J	Ms, Ms
CADMIUM	0.032	J	0.043	LOD	0.22	LOQ	mg/Kg	J	RI
CALCIUM	810	X	8.7	LOD	43	LOQ	mg/Kg	J+	Ms
COPPER	31	X	0.87	LOD	4.3	LOQ	mg/Kg	J+	Ms
LEAD	3.5	J	0.87	LOD	4.3	LOQ	mg/Kg	J	RI
MAGNESIUM	2100	X	4.3	LOD	43	LOQ	mg/Kg	J	Ms, Ms
MANGANESE	130	X	0.22	LOD	0.87	LOQ	mg/Kg	J	Ms, Ms
NICKEL	8.4	X	0.87	LOD	4.3	LOQ	mg/Kg	J+	Ms
POTASSIUM	1500	X	8.7	LOD	17	LOQ	mg/Kg	J	Ms, Ms
VANADIUM	22	X	0.87	LOD	2.2	LOQ	mg/Kg	J+	Ms

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	14000		36	LOD	110	LOQ	mg/Kg	J+	Ms
MANGANESE	210		1.8	LOD	7.1	LOQ	mg/Kg	J	Ms, Ms

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM			Analysis Type: Dilution-2			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	6900		140	LOD	360	LOQ	mg/Kg	J+	Ms

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.031	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
CALCIUM	640	X	7.1	LOD	36	LOQ	mg/Kg	J	Ms, Ms
COPPER	29	X	0.71	LOD	3.6	LOQ	mg/Kg	J+	Ms
LEAD	2.2	J	0.71	LOD	3.6	LOQ	mg/Kg	J	RI
MAGNESIUM	1300	X	3.6	LOD	36	LOQ	mg/Kg	J+	Ms
POTASSIUM	840	X	7.1	LOD	14	LOQ	mg/Kg	J-	Ms
SELENIUM	1.1	UX	1.1	LOD	1.4	LOQ	mg/Kg	UJ	Ms
VANADIUM	19	X	0.71	LOD	1.8	LOQ	mg/Kg	J+	Ms

Sample ID: H17-SB02-05		Collected: 6/16/2016 2:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.084	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.055	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	3.5	J	0.76	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: H17-SB03-05		Collected: 6/16/2016 2:45:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.13	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.060	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: WDS-SB18-12		Collected: 6/16/2016 8:30:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.2	J	0.71	LOD	1.4	LOQ	mg/Kg	J	RI
BERYLLIUM	0.067	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.025	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	1.9	J	0.71	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB19-12		Collected: 6/16/2016 8:30:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.95	J	0.74	LOD	1.5	LOQ	mg/Kg	J	RI
BERYLLIUM	0.025	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	0.61	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI
NICKEL	2.2	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:		Soil					

Sample ID: 201-SB01-10		Collected: 6/16/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.062	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: 201-SB01-25		Collected: 6/16/2016 9:20:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.077	J	0.033	LOD	0.13	LOQ	mg/Kg	J	RI

Sample ID: 203-SB01-10		Collected: 6/16/2016 10:10:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.13	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL			Matrix: Soil						

Sample ID: 203-SB01-12		Collected: 6/16/2016 10:45:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.13	J	0.036	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: 203-SB02-02		Collected: 6/16/2016 11:15:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.12	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: 203-SB03-05		Collected: 6/16/2016 11:45:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.11	J	0.036	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.089	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H17-SB02-05		Collected: 6/16/2016 2:40:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.090	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H17-SB03-05		Collected: 6/16/2016 2:45:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.12	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: WDS-SB18-12		Collected: 6/16/2016 8:30:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.099	J	0.036	LOD	0.14	LOQ	mg/Kg	J	RI	

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8082A	Matrix: Soil

Sample ID:H17-SB01-05		6/16/2016 3:10:00		Analysis Type: Initial				Dilution: 1	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.0073	U	0.0073	LOD	0.036	LOQ	mg/Kg	UJ	Surr

Sample ID:H17-SB02-05		6/16/2016 2:40:00		Analysis Type: Initial				Dilution: 1	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.0075	U	0.0075	LOD	0.037	LOQ	mg/Kg	UJ	Surr

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID:203-SB05-21		6/16/2016 12:00:00		Analysis Type: NEUTRAL				Dilution: 3	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Benzo (g,h,i) perylene	0.031	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Surr, Surr
BENZO(A)PYRENE	0.071	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Surr, Surr
BENZO(B)FLUORANTHENE	0.12	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Surr, Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID:203-SB05-21		6/16/2016 12:00:00			Initial1-BASE/			Dilution: 3	
		Collected: PM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.038	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Surr, Surr
CHRYSENE	0.11	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Surr, Surr
DIBENZO(A,H)ANTHRACENE	0.013	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Ms, Surr, Surr
INDENO(1,2,3-CD)PYRENE	0.031	X	0.0026	LOD	0.0026	LOQ	mg/Kg	J	Ms, Surr, Surr

Sample ID:203-SB05-21		6/16/2016 12:00:00			Initial2-BASE/			Dilution: 3000	
		Collected: PM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	60		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms
2-METHYLNAPHTHALENE	54		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms
ACENAPHTHENE	22		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms
ACENAPHTHYLENE	3.6		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms, Ms
ANTHRACENE	6.7		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms
BENZ(A)ANTHRACENE	2.6	U	2.6	LOD	2.6	LOQ	mg/Kg	UJ	Ms
FLUORANTHENE	3.6		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms, Ms
FLUORENE	20		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms, Ms
NAPHTHALENE	3.9		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms
PHENANTHRENE	45		2.6	LOD	2.6	LOQ	mg/Kg	J	Ms, Ms, Ms
PYRENE	4.4		2.6	LOD	2.6	LOQ	mg/Kg	J-	Ms

Sample ID:H17-SB01-05		6/16/2016 3:10:00			Initial-BASE/			Dilution: 1	
		Collected: PM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0040	YX	0.00074	LOD	0.00074	LOQ	mg/Kg	J+	Ms

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Soil

Sample ID:201-SB01-10		6/16/2016 9:15:00			Initial-ACID			Dilution: 1	
		Collected: AM	Analysis Type: Initial-ACID						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.91	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Soil

Sample ID:201-SB01-10		6/16/2016 9:15:00		Collected: AM				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
BENZOIC ACID	0.36	UYQZ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		
PENTACHLOROPHENOL	0.091	UYQ	0.091	LOD	0.17	LOQ	mg/Kg	UJ	Lcs		

Sample ID:201-SB01-10		6/16/2016 9:15:00		Collected: AM				Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
3,3'-DICHLOROBENZIDINE	0.73	UQ	0.73	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		

Sample ID:201-SB01-25		6/16/2016 9:20:00		Collected: AM				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4-DINITROPHENOL	0.17	UQ	0.17	LOD	0.86	LOQ	mg/Kg	UJ	Lcs		
BENZOIC ACID	0.35	UYQXZ	0.35	LOD	1.0	LOQ	mg/Kg	UJ	Lcs		
PENTACHLOROPHENOL	0.087	UYQX	0.087	LOD	0.17	LOQ	mg/Kg	UJ	Lcs		

Sample ID:201-SB01-25		6/16/2016 9:20:00		Collected: AM				Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
3,3'-DICHLOROBENZIDINE	0.69	UQX	0.69	LOD	1.0	LOQ	mg/Kg	UJ	Ms, Lcs		

Sample ID:203-SB01-10		6/16/2016 10:10:00		Collected: AM				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.90	LOQ	mg/Kg	UJ	Lcs		
BENZOIC ACID	0.36	UYQZ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		
PENTACHLOROPHENOL	0.090	UYQ	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Lcs		

Sample ID:203-SB01-10		6/16/2016 10:10:00		Collected: AM				Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID:203-SB01-12		Collected: AM		6/16/2016 10:45:00				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4-DINITROPHENOL	0.19	UQ	0.19	LOD	0.93	LOQ	mg/Kg	UJ	Lcs		
BENZOIC ACID	0.37	UYQZ	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		
PENTACHLOROPHENOL	0.093	UYQ	0.093	LOD	0.18	LOQ	mg/Kg	UJ	Lcs		

Sample ID:203-SB01-12		Collected: AM		6/16/2016 10:45:00				Initial-BASE/		Dilution: 1	
								Analysis Type: NEUTRAL			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
3,3'-DICHLOROBENZIDINE	0.75	UQ	0.75	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		

Sample ID:203-SB02-02		Collected: AM		6/16/2016 11:15:00				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4,5-TRICHLOROPHENOL	0.036	U	0.036	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
2,4,6-TRICHLOROPHENOL	0.036	U	0.036	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
2,4-DICHLOROPHENOL	0.090	U	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
2,4-Dimethyl phenol	0.090	U	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.89	LOQ	mg/Kg	UJ	Lcs, Surr		
2-CHLOROPHENOL	0.090	U	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
2-NITROPHENOL	0.090	U	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
4,6-DINITRO-2-METHYLPHENOL	0.090	U	0.090	LOD	0.34	LOQ	mg/Kg	UJ	Surr		
4-CHLORO-3-METHYLPHENOL	0.036	U	0.036	LOD	0.17	LOQ	mg/Kg	UJ	Surr		
4-NITROPHENOL	0.36	U	0.36	LOD	0.89	LOQ	mg/Kg	UJ	Surr		
BENZOIC ACID	0.36	UYQZ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs, Surr		
PENTACHLOROPHENOL	0.090	UYQ	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Lcs, Surr		
PHENOL	0.090	U	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Surr		

Sample ID:203-SB02-02		Collected: AM		6/16/2016 11:15:00				Initial-BASE/		Dilution: 1	
								Analysis Type: NEUTRAL			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Soil

Sample ID: 203-SB03-04		Collected: 6/16/2016 11:40:00 AM		Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.88	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.35	UYQZ	0.35	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.088	UYQ	0.088	LOD	0.17	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB03-04		Collected: 6/16/2016 11:40:00 AM		Analysis Type: Initial-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.70	UQ	0.70	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB03-05		Collected: 6/16/2016 11:45:00 AM		Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.88	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.35	UYQZ	0.35	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.089	UYQ	0.089	LOD	0.17	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB03-05		Collected: 6/16/2016 11:45:00 AM		Analysis Type: Initial-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.71	UQ	0.71	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB04-11		Collected: 6/16/2016 10:55:00 AM		Analysis Type: Initial-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.90	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.36	UYQZ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.090	UYQ	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB04-11		Collected: 6/16/2016 10:55:00 AM		Analysis Type: Initial-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
3-NITROANILINE	0.014	J	0.018	LOD	0.35	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Soil						

Sample ID: 203-SB04-14		Collected: 6/16/2016 11:10:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.17	UQ	0.17	LOD	0.86	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.35	UYQZ	0.35	LOD	1.0	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.087	UYQ	0.087	LOD	0.17	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB04-14		Collected: 6/16/2016 11:10:00 AM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.69	UQ	0.69	LOD	1.0	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB05-05		Collected: 6/16/2016 11:45:00 AM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.19	UQ	0.19	LOD	0.95	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.50	JYQZ	0.38	LOD	1.1	LOQ	mg/Kg	J	RI, Lcs
PENTACHLOROPHENOL	0.095	UYQ	0.095	LOD	0.18	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB05-05		Collected: 6/16/2016 11:45:00 AM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.76	UQ	0.76	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.22	UQX	0.22	LOD	1.1	LOQ	mg/Kg	UJ	Ms, Lcs
BENZOIC ACID	0.43	UYQXZ	0.43	LOD	1.3	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.11	UYQX	0.11	LOD	0.21	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.87	UQX	0.87	LOD	1.3	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.18	JX	0.022	LOD	0.21	LOQ	mg/Kg	J	RI, Ms

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIMETHYL PHTHALATE	0.022	UX	0.022	LOD	0.21	LOQ	mg/Kg	UJ	Ms

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.19	UQX	0.19	LOD	0.92	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.37	UYQXZ	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.093	UYQX	0.093	LOD	0.18	LOQ	mg/Kg	UJ	Lcs

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.74	UQX	0.74	LOD	1.1	LOQ	mg/Kg	UJ	Ms, Lcs
DI-N-OCTYL PHTHALATE	0.020	JX	0.019	LOD	0.18	LOQ	mg/Kg	J	RI, Ms

Sample ID: H17-SB02-05		Collected: 6/16/2016 2:40:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.19	UQ	0.19	LOD	0.95	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.38	UYQZ	0.38	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.096	UYQ	0.096	LOD	0.18	LOQ	mg/Kg	UJ	Lcs

Sample ID: H17-SB02-05		Collected: 6/16/2016 2:40:00 PM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.77	UQ	0.77	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H17-SB03-05		Collected: 6/16/2016 2:45:00 PM			Analysis Type: Initial-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.19	UQ	0.19	LOD	0.95	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.38	UYQZ	0.38	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.096	UYQ	0.096	LOD	0.18	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Sample ID: H17-SB03-05	Collected: 6/16/2016 2:45:00 PM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.77	UQ	0.77	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB18-12	Collected: 6/16/2016 8:30:00 AM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.90	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.36	UYQZ	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.090	UYQ	0.090	LOD	0.17	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB18-12	Collected: 6/16/2016 8:30:00 AM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.72	UQ	0.72	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB19-12	Collected: 6/16/2016 8:30:00 AM	Analysis Type: Initial-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.18	UQ	0.18	LOD	0.91	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.37	UYQZ	0.37	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
PENTACHLOROPHENOL	0.091	UYQ	0.091	LOD	0.18	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB19-12	Collected: 6/16/2016 8:30:00 AM	Analysis Type: Initial-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.73	UQ	0.73	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.12	J	0.018	LOD	0.18	LOQ	mg/Kg	J	RI
DIBENZOFURAN	0.069	J	0.018	LOD	0.18	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Soil

Sample ID:201-SB01-10		Collected: AM		6/16/2016 9:15:00				Analysis Type: Initial		Dilution: 1.04	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0023	UQ	0.0023	LOD	0.0057	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.011	UQ	0.011	LOD	0.023	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.043	Q	0.0023	LOD	0.011	LOQ	mg/Kg	J-	Lcs		
CHLOROMETHANE	0.0018	BQZ	0.00068	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		
METHYLENE CHLORIDE	0.0065	Q	0.0023	LOD	0.0057	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		

Sample ID:201-SB01-25		Collected: AM		6/16/2016 9:20:00				Analysis Type: Initial		Dilution: 0.98	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.010	UQX	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs		
2-HEXANONE	0.0020	UBQXZ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Ms		
ACETONE	0.0023	JQ	0.0020	LOD	0.010	LOQ	mg/Kg	J	RI, Ms, Lcs		
CHLOROMETHANE	0.0014	BQZ	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		
ETHYLBENZENE	0.00061	UX	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Ms		
METHYLENE CHLORIDE	0.0032	JQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		
STYRENE	0.00061	UX	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Ms		
VINYL ACETATE	0.00061	UXZ	0.00061	LOD	0.0051	LOQ	mg/Kg	UJ	Ms		
Xylene (Total)	0.0018	UX	0.0018	LOD	0.0031	LOQ	mg/Kg	UJ	Ms		

Sample ID:203-SB01-10		Collected: AM		6/16/2016 10:10:00				Analysis Type: Initial		Dilution: 0.86	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0019	UQ	0.0019	LOD	0.0047	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.0094	UQ	0.0094	LOD	0.019	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.0019	UQ	0.0019	LOD	0.0094	LOQ	mg/Kg	UJ	Lcs		
CHLOROMETHANE	0.0014	BQZ	0.00056	LOD	0.00094	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		

Sample ID:203-SB01-12		Collected: AM		6/16/2016 10:45:00				Analysis Type: Initial		Dilution: 0.79	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.0089	UQ	0.0089	LOD	0.018	LOQ	mg/Kg	UJ	Lcs, Lcs		

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C
Matrix: Soil

Sample ID: 203-SB01-12		Collected: 6/16/2016 10:45:00 AM		Analysis Type: Initial				Dilution: 0.79	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CIS-1,3-DICHLOROPROPENE	0.00053	UQ	0.00053	LOD	0.00089	LOQ	mg/Kg	UJ	Lcs
STYRENE	0.00053	UQ	0.00053	LOD	0.00089	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.00053	UQ	0.00053	LOD	0.00089	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB02-02		Collected: 6/16/2016 11:15:00 AM		Analysis Type: Initial				Dilution: 0.88	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.0096	UQ	0.0096	LOD	0.019	LOQ	mg/Kg	UJ	Lcs, Lcs
CIS-1,3-DICHLOROPROPENE	0.00058	UQ	0.00058	LOD	0.00096	LOQ	mg/Kg	UJ	Lcs
STYRENE	0.00058	UQ	0.00058	LOD	0.00096	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.00058	UQ	0.00058	LOD	0.00096	LOQ	mg/Kg	UJ	Lcs

Sample ID: 203-SB03-04		Collected: 6/16/2016 11:40:00 AM		Analysis Type: Initial				Dilution: 0.87	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0019	UQ	0.0019	LOD	0.0046	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.0093	UQ	0.0093	LOD	0.019	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.0058	JQ	0.0019	LOD	0.0093	LOQ	mg/Kg	J	RI, Lcs
CHLOROMETHANE	0.0014	BQZ	0.00056	LOD	0.00093	LOQ	mg/Kg	UJ	Lcs, Mb, Tb

Sample ID: 203-SB03-05		Collected: 6/16/2016 11:45:00 AM		Analysis Type: Initial				Dilution: 0.94	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.010	UQ	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.0020	UQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.0013	BQZ	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs, Mb, Tb

Sample ID: 203-SB04-11		Collected: 6/16/2016 10:55:00 AM		Analysis Type: Initial				Dilution: 0.9	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0019	UQ	0.0019	LOD	0.0049	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.0097	UQ	0.0097	LOD	0.019	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Soil

Sample ID:203-SB04-11		6/16/2016 10:55:00		Collected: AM				Analysis Type: Initial		Dilution: 0.9	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	0.0060	JQ	0.0019	LOD	0.0097	LOQ	mg/Kg	J	RI, Lcs		
CHLOROMETHANE	0.0012	BQZ	0.00058	LOD	0.00097	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		

Sample ID:203-SB04-14		6/16/2016 11:10:00		Collected: AM				Analysis Type: Initial		Dilution: 0.78	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0017	UQ	0.0017	LOD	0.0042	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.0083	UQ	0.0083	LOD	0.017	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.0017	UQ	0.0017	LOD	0.0083	LOQ	mg/Kg	UJ	Lcs		
CHLOROMETHANE	0.0011	BQZ	0.00050	LOD	0.00083	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		
METHYLENE CHLORIDE	0.00090	JQ	0.0017	LOD	0.0042	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		

Sample ID:203-SB05-05		6/16/2016 11:45:00		Collected: AM				Analysis Type: Initial		Dilution: 0.88	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.010	UQ	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.045	Q	0.0020	LOD	0.010	LOQ	mg/Kg	J-	Lcs		
CHLOROMETHANE	0.0013	BQZ	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		

Sample ID:203-SB05-21		6/16/2016 12:00:00		Collected: PM				Analysis Type: Initial		Dilution: 0.84	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,1,1,2-TETRACHLOROETHANE	0.00066	UX	0.00066	LOD	0.0011	LOQ	mg/Kg	UJ	Ms		
1,2-DIBROMO-3-CHLOROPROPANE	0.0022	UQX	0.0022	LOD	0.0055	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.011	UQX	0.011	LOD	0.022	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.0022	UQX	0.0022	LOD	0.011	LOQ	mg/Kg	UJ	Lcs		
BENZENE	0.029	X	0.00066	LOD	0.0011	LOQ	mg/Kg	NP	Ms, ProfJudg		
CHLOROMETHANE	0.0015	BQXZ	0.00066	LOD	0.0011	LOQ	mg/Kg	UJ	Ms, Lcs, Mb, Tb		
CIS-1,2-DICHLOROETHENE	0.0025	X	0.00066	LOD	0.0011	LOQ	mg/Kg	J-	Ms		
ETHYLBENZENE	0.63	JX	0.00066	LOD	0.0011	LOQ	mg/Kg	NP	Ms, Ms, ProfJudg		
STYRENE	0.00066	UX	0.00066	LOD	0.0011	LOQ	mg/Kg	UJ	Ms		

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Soil

Sample ID: 203-SB05-21		Collected: 6/16/2016 12:00:00 PM		Analysis Type: Initial				Dilution: 0.84	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TETRACHLOROETHENE	0.00066	UX	0.00066	LOD	0.0011	LOQ	mg/Kg	UJ	Ms
VINYL ACETATE	0.00066	UXZ	0.00066	LOD	0.0055	LOQ	mg/Kg	UJ	Ms
Xylene (Total)	0.53	X	0.0020	LOD	0.0033	LOQ	mg/Kg	NP	Ms, Ms, ProfJudg

Sample ID: H17-SB01-05		Collected: 6/16/2016 3:10:00 PM		Analysis Type: Initial				Dilution: 0.82	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0018	UQX	0.0018	LOD	0.0046	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.0092	UQX	0.0092	LOD	0.018	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.010	QX	0.0018	LOD	0.0092	LOQ	mg/Kg	J	Ms, Ms, Lcs
CHLOROBENZENE	0.00055	UX	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Ms
CHLORODIBROMOMETHANE	0.00055	UX	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Ms
CHLOROMETHANE	0.0012	BQZ	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
ETHYLBENZENE	0.00055	UX	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Ms
METHYLENE CHLORIDE	0.0012	JQ	0.0018	LOD	0.0046	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
STYRENE	0.00055	UX	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Ms
TETRACHLOROETHENE	0.00055	UX	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Ms
TOLUENE	0.00055	UX	0.00055	LOD	0.00092	LOQ	mg/Kg	UJ	Ms
VINYL ACETATE	0.00055	UXZ	0.00055	LOD	0.0046	LOQ	mg/Kg	UJ	Ms
Xylene (Total)	0.0017	UX	0.0017	LOD	0.0028	LOQ	mg/Kg	UJ	Ms

Sample ID: H17-SB02-05		Collected: 6/16/2016 2:40:00 PM		Analysis Type: Initial				Dilution: 0.88	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.0064	JQ	0.010	LOD	0.020	LOQ	mg/Kg	J	RI, Lcs, Lcs
ACETONE	0.068	Q	0.0020	LOD	0.010	LOQ	mg/Kg	J-	Lcs
CHLOROMETHANE	0.0014	BQZ	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
METHYLENE CHLORIDE	0.0011	JQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs, Mb, Tb

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Soil

Sample ID:H17-SB03-05		6/16/2016 2:45:00		Collected: PM				Analysis Type: Initial		Dilution: 0.84	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0019	UQ	0.0019	LOD	0.0049	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.0097	UQ	0.0097	LOD	0.019	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.078	Q	0.0019	LOD	0.0097	LOQ	mg/Kg	J-	Lcs		
CHLOROMETHANE	0.0014	BQZ	0.00058	LOD	0.00097	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		

Sample ID:TB-SO-061616-01		6/16/2016 8:05:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UQ	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs		
2-Butanone [MEK]	0.010	UQ	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs		
2-HEXANONE	0.033	BQZ	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs, Mb		
ACETONE	0.0020	UQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs		
CHLOROMETHANE	0.0016	BQZ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs, Mb		
METHYLENE CHLORIDE	0.0096	Q	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs, Mb		

Sample ID:WDS-SB18-12		6/16/2016 8:30:00		Collected: AM				Analysis Type: Initial		Dilution: 0.82	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.0089	UQ	0.0089	LOD	0.018	LOQ	mg/Kg	UJ	Lcs, Lcs		
ACETONE	0.0020	JZ	0.0018	LOD	0.0089	LOQ	mg/Kg	J	RI		
CIS-1,3-DICHLOROPROPENE	0.00053	UQ	0.00053	LOD	0.00089	LOQ	mg/Kg	UJ	Lcs		
STYRENE	0.00053	UQ	0.00053	LOD	0.00089	LOQ	mg/Kg	UJ	Lcs		
TRANS-1,3-DICHLOROPROPENE	0.00053	UQ	0.00053	LOD	0.00089	LOQ	mg/Kg	UJ	Lcs		

Sample ID:WDS-SB19-12		6/16/2016 8:30:00		Collected: AM				Analysis Type: Initial		Dilution: 0.87	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.0096	UQ	0.0096	LOD	0.019	LOQ	mg/Kg	UJ	Lcs, Lcs		
CARBON DISULFIDE	0.00082	J	0.00058	LOD	0.00096	LOQ	mg/Kg	J	RI		
CIS-1,3-DICHLOROPROPENE	0.00058	UQ	0.00058	LOD	0.00096	LOQ	mg/Kg	UJ	Lcs		
METHYLENE CHLORIDE	0.0033	JBQ	0.0019	LOD	0.0048	LOQ	mg/Kg	UJ	Lcs, Mb, Tb		
STYRENE	0.00058	UQ	0.00058	LOD	0.00096	LOQ	mg/Kg	UJ	Lcs		

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA								
Method:	8260C	Matrix:	Soil						

Sample ID: WDS-SB19-12 Collected: 6/16/2016 8:30:00 AM Analysis Type: Initial Dilution: 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRANS-1,3-DICHLOROPROPENE	0.00058	UQ	0.00058	LOD	0.00096	LOQ	mg/Kg	UJ	Lcs

Method Category:	VOA								
Method:	8260C-ME	Matrix:	Soil						

Sample ID: 203-SB05-21 Collected: 6/16/2016 12:00:00 PM Analysis Type: Initial Dilution: 93.2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,1,1-TRICHLOROETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,1,2,2-TETRACHLOROETHANE	0.074	UX	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,1,2-TRICHLOROETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,1-DICHLOROETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,1-DICHLOROETHENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,2,3-TRICHLOROPROPANE	0.074	UX	0.074	LOD	0.12	LOQ	mg/Kg	NP	Ms, ProfJudg
1,2-DIBROMO-3-CHLOROPROPANE	0.25	UXZ	0.25	LOD	0.61	LOQ	mg/Kg	NP	ProfJudg
1,2-DIBROMOETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,2-DICHLOROETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
1,2-DICHLOROPROPANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
2-Butanone [MEK]	0.61	U	0.61	LOD	1.2	LOQ	mg/Kg	NP	ProfJudg
2-HEXANONE	0.12	UX	0.12	LOD	0.25	LOQ	mg/Kg	NP	ProfJudg
ACETONE	0.25	U	0.25	LOD	0.61	LOQ	mg/Kg	NP	ProfJudg
BROMODICHLOROMETHANE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
BROMOFORM	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CARBON DISULFIDE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CARBON TETRACHLORIDE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CHLOROBENZENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CHLORODIBROMOMETHANE	0.074	UZ	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CHLOROETHANE	0.25	UYQX	0.25	LOD	0.61	LOQ	mg/Kg	NP	Ms, Lcs, ProfJudg
CHLOROFORM	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CHLOROMETHANE	0.21	Q	0.074	LOD	0.12	LOQ	mg/Kg	NP	Lcs, ProfJudg

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C-ME
Matrix: Soil

Sample ID: 203-SB05-21 6/16/2016 12:00:00 Collected: PM Analysis Type: Initial Dilution: 93.2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CIS-1,2-DICHLOROETHENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
CIS-1,3-DICHLOROPROPENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
Dichlorodifluoromethane [Freon-12]	0.25	U	0.25	LOD	0.61	LOQ	mg/Kg	NP	ProfJudg
METHYLENE CHLORIDE	0.12	UQ	0.12	LOD	0.25	LOQ	mg/Kg	NP	ProfJudg
STYRENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
TETRACHLOROETHENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
TOLUENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
TRANS-1,2-DICHLOROETHENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
TRANS-1,3-DICHLOROPROPENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
TRICHLOROETHENE	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
Trichlorofluoromethane [Freon-11]	0.074	U	0.074	LOD	0.12	LOQ	mg/Kg	NP	ProfJudg
VINYL ACETATE	0.074	U	0.074	LOD	3.1	LOQ	mg/Kg	NP	ProfJudg
VINYL CHLORIDE	0.074	U	0.074	LOD	0.098	LOQ	mg/Kg	NP	ProfJudg

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606652

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40430	7/29/2016 11:36:37 AM	COPPER ZINC	0.77 mg/Kg 1.4 mg/Kg	201-SB01-25 203-SB01-10 203-SB02-02 203-SB03-04 203-SB04-11 203-SB05-05
MB-40445	7/21/2016 2:41:09 PM	SODIUM	2.1 mg/Kg	H17-SB01-05
MB-40481	8/4/2016 11:23:38 AM	MANGANESE	0.37 mg/Kg	203-SB05-21

Method: 8260C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA10 MBLK 06231	6/23/2016 2:43:00 PM	METHYLENE CHLORIDE	0.0045 mg/Kg	203-SB01-12 203-SB02-02 WDS-SB18-12 WDS-SB19-12
VOA11B MBLK 0629	6/29/2016 7:00:00 PM	2-HEXANONE CHLOROMETHANE METHYLENE CHLORIDE	0.064 mg/Kg 0.0012 mg/Kg 0.0019 mg/Kg	201-SB01-10 201-SB01-25 203-SB01-10 203-SB03-04 203-SB03-05 203-SB04-11 203-SB04-14 203-SB05-05 203-SB05-21 H17-SB01-05 H17-SB02-05 H17-SB03-05 TB-SO-061616-01

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
201-SB01-10(Initial)	CHLOROMETHANE	0.0018 mg/Kg	0.0018U mg/Kg
201-SB01-10(Initial)	METHYLENE CHLORIDE	0.0065 mg/Kg	0.0065U mg/Kg
201-SB01-25(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
201-SB01-25(Initial)	METHYLENE CHLORIDE	0.0032 mg/Kg	0.0051U mg/Kg
203-SB01-10(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
203-SB03-04(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
203-SB03-05(Initial)	CHLOROMETHANE	0.0013 mg/Kg	0.0013U mg/Kg
203-SB04-11(Initial)	CHLOROMETHANE	0.0012 mg/Kg	0.0012U mg/Kg
203-SB04-14(Initial)	CHLOROMETHANE	0.0011 mg/Kg	0.0011U mg/Kg
203-SB04-14(Initial)	METHYLENE CHLORIDE	0.00090 mg/Kg	0.0042U mg/Kg
203-SB05-05(Initial)	CHLOROMETHANE	0.0013 mg/Kg	0.0013U mg/Kg
203-SB05-21(Initial)	CHLOROMETHANE	0.0015 mg/Kg	0.0015U mg/Kg
H17-SB01-05(Initial)	CHLOROMETHANE	0.0012 mg/Kg	0.0012U mg/Kg
H17-SB01-05(Initial)	METHYLENE CHLORIDE	0.0012 mg/Kg	0.0046U mg/Kg

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Method Blank Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
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The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H17-SB02-05(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
H17-SB02-05(Initial)	METHYLENE CHLORIDE	0.0011 mg/Kg	0.0051U mg/Kg
H17-SB03-05(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
TB-SO-061616-01(Initial)	2-HEXANONE	0.033 mg/Kg	0.033U mg/Kg
TB-SO-061616-01(Initial)	CHLOROMETHANE	0.0016 mg/Kg	0.0016U mg/Kg
TB-SO-061616-01(Initial)	METHYLENE CHLORIDE	0.0096 mg/Kg	0.0096U mg/Kg
WDS-SB19-12(Initial)	METHYLENE CHLORIDE	0.0033 mg/Kg	0.0048U mg/Kg

Method: 8260C-ME

Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK2 062	6/30/2016 6:47:00 AM	METHYLENE CHLORIDE	0.045 mg/Kg	203-SB05-21

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
H17-SB01-05 (Initial)	TETRACHLORO-M-XYLENE	43	44.00-130.00	All Target Analytes	J-(all detects) UJ(all non-detects)
H17-SB02-05 (Initial)	DECACHLOROBIPHENYL	53.1	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB05-21 (Initial)	4-Bromofluorobenzene	447	79.00-119.00	No Affected Compounds	
WDS-SB18-12 (Initial)	TOLUENE-D8	84.8	85.00-116.00	No Affected Compounds	

Method: 8260C-ME
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB05-21 (Initial)	4-Bromofluorobenzene	159	79.00-119.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
201-SB01-10 (Initial)	2-FLUOROBIPHENYL	279	46.00-115.00	All Base/Neutral Target Analytes	J+ (all detects)
	Nitrobenzene-d5	292	44.00-125.00		
	Terphenyl-d14	296	58.00-133.00		
203-SB05-21 (Initial1)	2-FLUOROBIPHENYL	34.1	46.00-115.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
203-SB05-21 (Initial1)	Nitrobenzene-d5	135	44.00-125.00	All Base/Neutral Target Analytes	J+(all detects)
	Terphenyl-d14	142	58.00-133.00		

Method: 8270D-MOD
Matrix: Soil

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB02-02 (Initial)	2,4,6-TRIBROMOPHENOL	36.8	39.00-132.00	All Acid Target Analytes	J-(all detects) UJ(all non-detects)
	2-FLUOROPHENOL	34.3	35.00-115.00		

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	1-METHYLNAPHTHALENE	133	130	43.00-111.00	-	1-METHYLNAPHTHALENE	J+ (all detects)

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	4-NITROPHENOL DIBENZOFURAN DIETHYL PHTHALATE PENTACHLOROPHENOL	166 497 303 274	219 - 206 -	30.00-132.00 44.00-120.00 50.00-124.00 25.00-133.00	26.24 (25.00) 153.12 (25.00) 39.44 (25.00) 80.18 (25.00)	4-NITROPHENOL DIBENZOFURAN DIETHYL PHTHALATE PENTACHLOROPHENOL	J(all detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	DIMETHYL PHTHALATE	227	25	48.00-124.00	160.74 (25.00)	DIMETHYL PHTHALATE	J(all detects) UJ(all non-detects)
203-SB05-21MS (203-SB05-21)	2,4-DINITROPHENOL	42.2	-	50.00-130.00	-	2,4-DINITROPHENOL	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1,2,4-TRICHLOROBENZENE	227	222	34.00-118.00	-	1,2,4-TRICHLOROBENZENE	J+(all detects)
	1,2-DICHLOROBENZENE	208	205	33.00-117.00	-	1,2-DICHLOROBENZENE	
	1,3-DICHLOROBENZENE	205	193	30.00-115.00	-	1,3-DICHLOROBENZENE	
	1,4-DICHLOROBENZENE	204	198	31.00-115.00	-	1,4-DICHLOROBENZENE	
	2,4,5-TRICHLOROPHENOL	203	192	41.00-124.00	-	2,4,5-TRICHLOROPHENOL	
	2,4,6-TRICHLOROPHENOL	347	354	39.00-126.00	-	2,4,6-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	327	341	40.00-122.00	-	2,4-DICHLOROPHENOL	
	2,4-Dimethyl phenol	216	207	30.00-127.00	-	2,4-Dimethyl phenol	
	2,4-DINITROTOLUENE	464	407	48.00-126.00	-	2,4-DINITROTOLUENE	
	2-CHLORONAPHTHALENE	190	190	41.00-114.00	-	2-CHLORONAPHTHALENE	
	2-CHLOROPHENOL	212	210	34.00-121.00	-	2-CHLOROPHENOL	
	2-Methylphenol (o-Cresol)	206	201	32.00-122.00	-	2-Methylphenol (o-Cresol)	
	2-NITROANILINE	280	268	44.00-127.00	-	2-NITROANILINE	
	2-NITROPHENOL	311	331	36.00-123.00	-	2-NITROPHENOL	
	3,3'-DICHLOROBENZIDINE	233	232	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	
	3/4-Methylphenol [m/p-Cresol]	184	186	34.00-119.00	-	3/4-Methylphenol [m/p-Cresol]	
	3-NITROANILINE	260	244	33.00-119.00	-	3-NITROANILINE	
	4-BROMOPHENYL PHENYL ETHER	231	218	46.00-124.00	-	4-BROMOPHENYL PHENYL ETHER	
	4-CHLORO-3-METHYLPHENOL	443	494	45.00-122.00	-	4-CHLORO-3-METHYLPHENOL	
	4-Chloroaniline [p-Chloroaniline]	175	144	17.00-106.00	-	4-Chloroaniline [p-Chloroaniline]	
	4-CHLOROPHENYL PHENYL ETHER	278	232	45.00-121.00	-	4-CHLOROPHENYL PHENYL ETHER	
	4-NITROANILINE	227	220	50.00-130.00	-	4-NITROANILINE	
	BENZOIC ACID	404	413	40.00-117.00	-	BENZOIC ACID	
	BENZYL ALCOHOL	203	200	29.00-122.00	-	BENZYL ALCOHOL	
	bis(2-chloroethoxy) methane	207	212	36.00-121.00	-	bis(2-chloroethoxy) methane	
	BIS(2-CHLOROETHYL) ETHER	187	184	31.00-120.00	-	BIS(2-CHLOROETHYL) ETHER	
	BIS(2-CHLOROISOPROPYL) ETHER	188	181	33.00-131.00	-	BIS(2-CHLOROISOPROPYL) ETHER	
	BIS(2-ETHYLHEXYL) PHTHALATE	245	237	51.00-133.00	-	BIS(2-ETHYLHEXYL) PHTHALATE	
	Butyl benzyl phthalate	238	230	48.00-132.00	-	Butyl benzyl phthalate	
	CARBAZOLE	224	218	50.00-123.00	-	CARBAZOLE	
	DI-N-BUTYL PHTHALATE	222	220	51.00-128.00	-	DI-N-BUTYL PHTHALATE	
	DI-N-OCTYL PHTHALATE	234	229	45.00-140.00	-	DI-N-OCTYL PHTHALATE	
	HEXACHLOROBENZENE	225	219	45.00-122.00	-	HEXACHLOROBENZENE	
HEXACHLOROBUTADIENE	255	246	32.00-123.00	-	HEXACHLOROBUTADIENE		
HEXACHLOROETHANE	250	286	28.00-117.00	-	HEXACHLOROETHANE		
ISOPHORONE	191	188	30.00-122.00	-	ISOPHORONE		
NITROBENZENE	207	202	34.00-122.00	-	NITROBENZENE		
N-NITROSODIMETHYLAMINE	153	149	23.00-120.00	-	N-NITROSODIMETHYLAMINE		
N-Nitrosodi-n-propylamine	238	270	36.00-120.00	-	N-Nitrosodi-n-propylamine		
N-NITROSODIPHENYLAMINE	1420	1290	38.00-127.00	-	N-NITROSODIPHENYLAMINE		
PHENOL	195	193	34.00-121.00	-	PHENOL		
201-SB01-25MSD (201-SB01-25)	2,4-DINITROPHENOL	-	-	50.00-130.00	34.66 (25.00)	2,4-DINITROPHENOL	J(all detects)
201-SB01-25MS 201-SB01-25MSD (201-SB01-25)	3,3'-DICHLOROBENZIDINE	0	0	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD							
Matrix: Soil							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
201-SB01-25MS 201-SB01-25MSD (201-SB01-25)	1,2,4-TRICHLOROENZENE	229	213	34.00-118.00	-	1,2,4-TRICHLOROENZENE	J+(all detects)
	1,2-DICHLOROENZENE	214	198	33.00-117.00	-	1,2-DICHLOROENZENE	
	1,3-DICHLOROENZENE	205	196	30.00-115.00	-	1,3-DICHLOROENZENE	
	1,4-DICHLOROENZENE	206	192	31.00-115.00	-	1,4-DICHLOROENZENE	
	2,4,5-TRICHLOROPHENOL	241	220	41.00-124.00	-	2,4,5-TRICHLOROPHENOL	
	2,4,6-TRICHLOROPHENOL	250	234	39.00-126.00	-	2,4,6-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	250	236	40.00-122.00	-	2,4-DICHLOROPHENOL	
	2,4-DINITROTOLUENE	258	226	48.00-126.00	-	2,4-DINITROTOLUENE	
	2,6-DINITROTOLUENE	228	213	46.00-124.00	-	2,6-DINITROTOLUENE	
	2-CHLORONAPHTHALENE	200	185	41.00-114.00	-	2-CHLORONAPHTHALENE	
	2-CHLOROPHENOL	211	205	34.00-121.00	-	2-CHLOROPHENOL	
	2-Methylphenol (o-Cresol)	180	172	32.00-122.00	-	2-Methylphenol (o-Cresol)	
	2-NITROANILINE	225	206	44.00-127.00	-	2-NITROANILINE	
	2-NITROPHENOL	234	230	36.00-123.00	-	2-NITROPHENOL	
	3/4-Methylphenol [m/p-Cresol]	174	162	34.00-119.00	-	3/4-Methylphenol [m/p-Cresol]	
	3-NITROANILINE	224	220	33.00-119.00	-	3-NITROANILINE	
	4,6-DINITRO-2-METHYLPHENOL	183	166	29.00-132.00	-	4,6-DINITRO-2-METHYLPHENOL	
	4-BROMOPHENYL PHENYL ETHER	216	204	46.00-124.00	-	4-BROMOPHENYL PHENYL ETHER	
	4-CHLORO-3-METHYLPHENOL	242	228	45.00-122.00	-	4-CHLORO-3-METHYLPHENOL	
	4-Chloroaniline [p-Chloroaniline]	144	145	17.00-106.00	-	4-Chloroaniline [p-Chloroaniline]	
	4-CHLOROPHENYL PHENYL ETHER	247	224	45.00-121.00	-	4-CHLOROPHENYL PHENYL ETHER	
	4-NITROANILINE	195	179	50.00-130.00	-	4-NITROANILINE	
	4-NITROPHENOL	208	192	30.00-132.00	-	4-NITROPHENOL	
	BENZOIC ACID	205	204	40.00-117.00	-	BENZOIC ACID	
	BENZYL ALCOHOL	207	191	29.00-122.00	-	BENZYL ALCOHOL	
	bis(2-chloroethoxy) methane	192	177	36.00-121.00	-	bis(2-chloroethoxy) methane	
	BIS(2-CHLOROETHYL) ETHER	197	184	31.00-120.00	-	BIS(2-CHLOROETHYL) ETHER	
	BIS(2-CHLOROISOPROPYL) ETHER	203	193	33.00-131.00	-	BIS(2-CHLOROISOPROPYL) ETHER	
	BIS(2-ETHYLHEXYL) PHTHALATE	244	217	51.00-133.00	-	BIS(2-ETHYLHEXYL) PHTHALATE	
	Butyl benzyl phthalate	235	215	48.00-132.00	-	Butyl benzyl phthalate	
	CARBAZOLE	216	198	50.00-123.00	-	CARBAZOLE	
	DIBENZOFURAN	222	204	44.00-120.00	-	DIBENZOFURAN	
	DIETHYL PHTHALATE	236	212	50.00-124.00	-	DIETHYL PHTHALATE	
	DIMETHYL PHTHALATE	225	204	48.00-124.00	-	DIMETHYL PHTHALATE	
	DI-N-BUTYL PHTHALATE	216	199	51.00-128.00	-	DI-N-BUTYL PHTHALATE	
	DI-N-OCTYL PHTHALATE	234	214	45.00-140.00	-	DI-N-OCTYL PHTHALATE	
	HEXACHLOROENZENE	214	194	45.00-122.00	-	HEXACHLOROENZENE	
	HEXACHLOROBTADIENE	252	237	32.00-123.00	-	HEXACHLOROBTADIENE	
	HEXACHLOROETHANE	208	187	28.00-117.00	-	HEXACHLOROETHANE	
	ISOPHORONE	198	186	30.00-122.00	-	ISOPHORONE	
	NITROENZENE	214	199	34.00-122.00	-	NITROENZENE	
	N-NITROSODIMETHYLAMINE	159	150	23.00-120.00	-	N-NITROSODIMETHYLAMINE	
	N-Nitrosodi-n-propylamine	204	191	36.00-120.00	-	N-Nitrosodi-n-propylamine	
	N-NITROSODIPHENYLAMINE	187	173	38.00-127.00	-	N-NITROSODIPHENYLAMINE	
	PENTACHLOROPHENOL	234	251	25.00-133.00	-	PENTACHLOROPHENOL	
	PHENOL	199	187	34.00-121.00	-	PHENOL	
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	3,3'-DICHLOROENZIDINE	0	0	22.00-121.00	-	3,3'-DICHLOROENZIDINE	J-(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	1,2,4-TRICHLOROENZENE	189	218	34.00-118.00	-	1,2,4-TRICHLOROENZENE	J+(all detects)
	1,2-DICHLOROENZENE	176	203	33.00-117.00	-	1,2-DICHLOROENZENE	
	1,3-DICHLOROENZENE	171	198	30.00-115.00	-	1,3-DICHLOROENZENE	
	1,4-DICHLOROENZENE	170	199	31.00-115.00	-	1,4-DICHLOROENZENE	
	2,4,5-TRICHLOROPHENOL	200	230	41.00-124.00	-	2,4,5-TRICHLOROPHENOL	
	2,4,6-TRICHLOROPHENOL	210	233	39.00-126.00	-	2,4,6-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	213	244	40.00-122.00	-	2,4-DICHLOROPHENOL	
	2,4-Dimethyl phenol	162	188	30.00-127.00	-	2,4-Dimethyl phenol	
	2,4-DINITROPHENOL	202	233	50.00-130.00	-	2,4-DINITROPHENOL	
	2,4-DINITROTOLUENE	202	243	48.00-126.00	-	2,4-DINITROTOLUENE	
	2,6-DINITROTOLUENE	192	216	46.00-124.00	-	2,6-DINITROTOLUENE	
	2-CHLORONAPHTHALENE	162	185	41.00-114.00	-	2-CHLORONAPHTHALENE	
	2-CHLOROPHENOL	178	210	34.00-121.00	-	2-CHLOROPHENOL	
	2-Methylphenol (o-Cresol)	178	195	32.00-122.00	-	2-Methylphenol (o-Cresol)	
	2-NITROANILINE	190	215	44.00-127.00	-	2-NITROANILINE	
	2-NITROPHENOL	213	241	36.00-123.00	-	2-NITROPHENOL	
	3/4-Methylphenol [m/p-Cresol]	162	183	34.00-119.00	-	3/4-Methylphenol [m/p-Cresol]	
	3-NITROANILINE	189	213	33.00-119.00	-	3-NITROANILINE	
	4,6-DINITRO-2-METHYLPHENOL	232	268	29.00-132.00	-	4,6-DINITRO-2-METHYLPHENOL	
	4-BROMOPHENYL PHENYL ETHER	175	200	46.00-124.00	-	4-BROMOPHENYL PHENYL ETHER	
	4-CHLORO-3-METHYLPHENOL	212	239	45.00-122.00	-	4-CHLORO-3-METHYLPHENOL	
	4-Chloroaniline [p-Chloroaniline]	152	169	17.00-106.00	-	4-Chloroaniline [p-Chloroaniline]	
	4-CHLOROPHENYL PHENYL ETHER	200	228	45.00-121.00	-	4-CHLOROPHENYL PHENYL ETHER	
	4-NITROANILINE	161	192	50.00-130.00	-	4-NITROANILINE	
	4-NITROPHENOL	171	191	30.00-132.00	-	4-NITROPHENOL	
	BENZOIC ACID	360	346	40.00-117.00	-	BENZOIC ACID	
	BENZYL ALCOHOL	171	198	29.00-122.00	-	BENZYL ALCOHOL	
	bis(2-chloroethoxy) methane	157	180	36.00-121.00	-	bis(2-chloroethoxy) methane	
	BIS(2-CHLOROETHYL) ETHER	156	182	31.00-120.00	-	BIS(2-CHLOROETHYL) ETHER	
	BIS(2-CHLOROISOPROPYL) ETHER	157	182	33.00-131.00	-	BIS(2-CHLOROISOPROPYL) ETHER	
	BIS(2-ETHYLHEXYL) PHTHALATE	195	221	51.00-133.00	-	BIS(2-ETHYLHEXYL) PHTHALATE	
	Butyl benzyl phthalate	188	214	48.00-132.00	-	Butyl benzyl phthalate	
	CARBAZOLE	181	202	50.00-123.00	-	CARBAZOLE	
	DIBENZOFURAN	184	206	44.00-120.00	-	DIBENZOFURAN	
	DIETHYL PHTHALATE	194	211	50.00-124.00	-	DIETHYL PHTHALATE	
	DIMETHYL PHTHALATE	187	207	48.00-124.00	-	DIMETHYL PHTHALATE	
	DI-N-BUTYL PHTHALATE	178	201	51.00-128.00	-	DI-N-BUTYL PHTHALATE	
	DI-N-OCTYL PHTHALATE	193	214	45.00-140.00	-	DI-N-OCTYL PHTHALATE	
	HEXACHLOROENZENE	173	201	45.00-122.00	-	HEXACHLOROENZENE	
	HEXACHLOROBUTADIENE	206	246	32.00-123.00	-	HEXACHLOROBUTADIENE	
HEXACHLOROETHANE	167	184	28.00-117.00	-	HEXACHLOROETHANE		
ISOPHORONE	163	181	30.00-122.00	-	ISOPHORONE		
NITROENZENE	176	201	34.00-122.00	-	NITROENZENE		
N-NITROSODIMETHYLAMINE	132	154	23.00-120.00	-	N-NITROSODIMETHYLAMINE		
N-Nitrosodi-n-propylamine	168	188	36.00-120.00	-	N-Nitrosodi-n-propylamine		
N-NITROSODIPHENYLAMINE	166	189	38.00-127.00	-	N-NITROSODIPHENYLAMINE		
PENTACHLOROPHENOL	194	210	25.00-133.00	-	PENTACHLOROPHENOL		
PHENOL	165	191	34.00-121.00	-	PHENOL		

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE NAPHTHALENE	22400 18200 7740 30400	43800 39400 3150 44700	43.00-111.00 39.00-114.00 44.00-111.00 38.00-111.00	32.71 (25.00) 34.91 (25.00) 68.98 (25.00) 36.36 (25.00)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE NAPHTHALENE	J(all detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	ACENAPHTHYLENE ANTHRACENE DIBENZO(A,H)ANTHRACENE FLUORANTHENE FLUORENE PHENANTHRENE	1510 -358000 - -122000 4800 -332000	-130 -281000 -50.4 23500 -181 9780	39.00-116.00 50.00-114.00 50.00-129.00 55.00-119.00 47.00-114.00 49.00-113.00	82.85 (25.00) 116.16 (25.00) 134.46 (25.00) 173.64 (25.00) 77.83 (25.00) 174.31 (25.00)	ACENAPHTHYLENE ANTHRACENE DIBENZO(A,H)ANTHRACENE FLUORANTHENE FLUORENE PHENANTHRENE	J(all detects) UJ(all non-detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	BENZO(A)ANTHRACENE Benzo (g,h,i) perylene BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE INDENO(1,2,3-CD)PYRENE PYRENE	-60.8 - 9.64 -52.7 24.5 -11.3 33.5 -163	-176 - -51.5 -169 12.3 -146 10.1 -715	54.00-122.00 50.00-125.00 53.00-128.00 56.00-123.00 57.00-118.00 49.00-130.00 55.00-117.00	- - - - - - - -	BENZO(A)ANTHRACENE Benzo (g,h,i) perylene BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE INDENO(1,2,3-CD)PYRENE PYRENE	J-(all detects) UJ(all non-detects)

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
201-SB01-25MS (Dry) 201-SB01-25MSD (Dry) (201-SB01-25)	IRON	393	-369	81.00-118.00	-	IRON	J(all detects) UJ(all non-detects)
201-SB01-25MS (Dry) 201-SB01-25MSD (Dry) (201-SB01-25)	ALUMINUM MAGNESIUM MANGANESE POTASSIUM	-596 15.1 -68.9 18	-816 -4.38 -46.7 12.3	74.00-119.00 78.00-115.00 84.00-114.00 81.00-116.00	- - - -	ALUMINUM MAGNESIUM MANGANESE POTASSIUM	J-(all detects) UJ(all non-detects)
201-SB01-25MS (Dry) 201-SB01-25MSD (Dry) (201-SB01-25)	CALCIUM	214	129	81.00-116.00	-	CALCIUM	J+(all detects)
H17-SB01-05MS (Dry) H17-SB01-05MSD (Dry) (H17-SB01-05)	CALCIUM MANGANESE	356 -16.1	124 197	81.00-116.00 84.00-114.00	38.92 (20.00) -	CALCIUM MANGANESE	J(all detects) UJ(all non-detects)
H17-SB01-05MS (Dry) H17-SB01-05MSD (Dry) (H17-SB01-05)	POTASSIUM SELENIUM	- 69.2	63.5 72.4	81.00-116.00 78.00-111.00	- -	POTASSIUM SELENIUM	J-(all detects) UJ(all non-detects)
H17-SB01-05MS (Dry) H17-SB01-05MSD (Dry) (H17-SB01-05)	ALUMINUM COPPER IRON MAGNESIUM VANADIUM	4650 138 1130 - 122	5690 144 1460 171 -	74.00-119.00 81.00-117.00 81.00-118.00 78.00-115.00 82.00-114.00	- - - - -	ALUMINUM COPPER IRON MAGNESIUM VANADIUM	J+(all detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
203-SB05-21MS (Dry) 203-SB05-21MSD (Dry) (203-SB05-21)	ALUMINUM BARIUM IRON MAGNESIUM MANGANESE POTASSIUM	-196 72.3 -221 -20.4 45.1 15.7	7500 114 504 136 143 122	74.00-119.00 83.00-113.00 81.00-118.00 78.00-115.00 84.00-114.00 81.00-116.00	- - - - - -	ALUMINUM BARIUM IRON MAGNESIUM MANGANESE POTASSIUM	J(all detects) UJ(all non-detects)
203-SB05-21MSD (Dry) (203-SB05-21)	CALCIUM COPPER NICKEL VANADIUM	- - - -	160 130 121 116	81.00-116.00 81.00-117.00 83.00-113.00 82.00-114.00	- - - -	CALCIUM COPPER NICKEL VANADIUM	J+(all detects)

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1,1,2,2-TETRACHLOROETHANE 1,2,3-TRICHLOROPROPANE 1,2-DIBROMO-3-CHLOROPROPAN 2-Butanone [MEK] 2-HEXANONE ACETONE BROMODICHLOROMETHANE CHLOROBENZENE	189 211 307 515 1190 1470 - -	1030 278 659 227 2670 - 167 -	70.00-124.00 73.00-125.00 61.00-132.00 51.00-148.00 53.00-145.00 36.00-164.00 75.00-127.00 79.00-120.00	142.14 (25.00) 35.68 (25.00) 80.38 (25.00) 70.04 (25.00) 84.07 (25.00) 159.29 (25.00) 53.57 (25.00) 37.24 (25.00)	1,1,2,2-TETRACHLOROETHANE 1,2,3-TRICHLOROPROPANE 1,2-DIBROMO-3-CHLOROPROPAN 2-Butanone [MEK] 2-HEXANONE ACETONE BROMODICHLOROMETHANE CHLOROBENZENE	J(all detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	ETHYLBENZENE VINYL ACETATE Xylene (Total)	-5830 37.2 -1630	-3800 21 -1200	76.00-122.00 50.00-151.00 78.00-124.00	139.43 (25.00) 47.55 (25.00) 112.53 (25.00)	ETHYLBENZENE VINYL ACETATE Xylene (Total)	J(all detects) UJ(all non-detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1,1,1,2-TETRACHLOROETHANE BENZENE CIS-1,2-DICHLOROETHENE STYRENE TETRACHLOROETHENE	75.5 -175 - 63 -	- -154 68 72.6 69.6	78.00-125.00 77.00-121.00 77.00-123.00 76.00-124.00 73.00-128.00	- - - - -	1,1,1,2-TETRACHLOROETHANE BENZENE CIS-1,2-DICHLOROETHENE STYRENE TETRACHLOROETHENE	J-(all detects) UJ(all non-detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1,1,2-TRICHLOROETHANE 1,2-DIBROMOETHANE 1,2-DICHLOROETHANE CHLOROMETHANE METHYLENE CHLORIDE	129 143 131 159 148	- 127 - - -	78.00-124.00 78.00-122.00 73.00-128.00 50.00-136.00 70.00-128.00	- - - - -	1,1,2-TRICHLOROETHANE 1,2-DIBROMOETHANE 1,2-DICHLOROETHANE CHLOROMETHANE METHYLENE CHLORIDE	J+(all detects)
201-SB01-25MSD (201-SB01-25)	1,2-DIBROMO-3-CHLOROPROPAN ACETONE	- -	- -	61.00-132.00 36.00-164.00	40.38 (25.00) 27.79 (25.00)	1,2-DIBROMO-3-CHLOROPROPAN ACETONE	J(all detects)
201-SB01-25MS 201-SB01-25MSD (201-SB01-25)	VINYL ACETATE	25	152	50.00-151.00	148.74 (25.00)	VINYL ACETATE	J(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
201-SB01-25MS 201-SB01-25MSD (201-SB01-25)	2-HEXANONE ETHYLBENZENE STYRENE Xylene (Total)	0 - 61.2 -	0 75.9 60.3 75.6	53.00-145.00 76.00-122.00 76.00-124.00 78.00-124.00	- - - -	2-HEXANONE ETHYLBENZENE STYRENE Xylene (Total)	J-(all detects) UJ(all non-detects)
201-SB01-25MS 201-SB01-25MSD (201-SB01-25)	2-Butanone [MEK]	154	163	51.00-148.00	-	2-Butanone [MEK]	J+(all detects)
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	1,2-DIBROMO-3-CHLOROPROPAN ACETONE	233 199	158 1000	61.00-132.00 36.00-164.00	31.81 (25.00) 118.36 (25.00)	1,2-DIBROMO-3-CHLOROPROPA ACETONE	J(all detects)
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	VINYL ACETATE	165	28.8	50.00-151.00	136.98 (25.00)	VINYL ACETATE	J(all detects) UJ(all non-detects)
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	CHLOROBENZENE CHLORODIBROMOMETHANE ETHYLBENZENE STYRENE TETRACHLOROETHENE TOLUENE Xylene (Total)	- - - 67.7 - - -	72 71.9 70.8 53.3 68.9 75.7 68.1	79.00-120.00 74.00-126.00 76.00-122.00 76.00-124.00 73.00-128.00 77.00-121.00 78.00-124.00	- - - - - - -	CHLOROBENZENE CHLORODIBROMOMETHANE ETHYLBENZENE STYRENE TETRACHLOROETHENE TOLUENE Xylene (Total)	J-(all detects) UJ(all non-detects)
H17-SB01-05MS H17-SB01-05MSD (H17-SB01-05)	1,2,3-TRICHLOROPROPANE 2-Butanone [MEK] 2-HEXANONE	126 174 240	- 206 218	73.00-125.00 51.00-148.00 53.00-145.00	- - -	1,2,3-TRICHLOROPROPANE 2-Butanone [MEK] 2-HEXANONE	J+(all detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
203-SB05-21MSD (203-SB05-21)	Trichlorofluoromethane [Freon-11]	-	-	62.00-140.00	27.09 (25.00)	Trichlorofluoromethane [Freon-11]	J(all detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1,2,3-TRICHLOROPROPANE CHLOROETHANE	49 28.8	- 58.3	73.00-125.00 59.00-139.00	80.92 (25.00) 67.74 (25.00)	1,2,3-TRICHLOROPROPANE CHLOROETHANE	J(all detects) UJ(all non-detects)
203-SB05-21MS 203-SB05-21MSD (203-SB05-21)	1,1,2,2-TETRACHLOROETHANE 1,2-DIBROMO-3-CHLOROPROPAN 2-HEXANONE	232 222 169	221 213 167	70.00-124.00 61.00-132.00 53.00-145.00	- - -	1,1,2,2-TETRACHLOROETHANE 1,2-DIBROMO-3-CHLOROPROPA 2-HEXANONE	J+(all detects)

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

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Method: 8270D-MOD

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40266 (201-SB01-10 201-SB01-25 203-SB01-10 203-SB01-12 203-SB02-02 203-SB03-04 203-SB03-05 203-SB04-11 203-SB04-14 203-SB05-05 203-SB05-21 H17-SB01-05 H17-SB02-05 H17-SB03-05 WDS-SB18-12 WDS-SB19-12)	2,4-DINITROPHENOL 3,3'-DICHLOROBENZIDINE BENZOIC ACID PENTACHLOROPHENOL	16.4 0 12.2 14.4	- - - -	50.00-130.00 22.00-121.00 40.00-117.00 25.00-133.00	- - - -	2,4-DINITROPHENOL 3,3'-DICHLOROBENZIDINE BENZOIC ACID PENTACHLOROPHENOL	J- (all detects) UJ (all non-detects)

Method: 8260C

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA10 LCSD 06231 (203-SB01-12 203-SB02-02 WDS-SB18-12 WDS-SB19-12)	2-Butanone [MEK]	-	0	51.00-148.00	200 (25.00)	2-Butanone [MEK]	J(all detects) UJ(all non-detects)
VOA10 LCS 062316 VOA10 LCSD 06231 (203-SB01-12 203-SB02-02 WDS-SB18-12 WDS-SB19-12)	CIS-1,3-DICHLOROPROPENE STYRENE TRANS-1,3-DICHLOROPROPENE	73.9 73.1 -	73 - 70.6	74.00-126.00 76.00-124.00 71.00-130.00	- - -	CIS-1,3-DICHLOROPROPENE STYRENE TRANS-1,3-DICHLOROPROPENE	J-(all detects) UJ(all non-detects)
VOA10 LCS 062316 (203-SB01-12 203-SB02-02 WDS-SB18-12 WDS-SB19-12)	METHYLENE CHLORIDE	130	-	70.00-128.00	-	METHYLENE CHLORIDE	J+(all detects)
VOA11B LCS 06291 VOA11B LCSD 0629 (201-SB01-10 201-SB01-25 203-SB01-10 203-SB03-04 203-SB03-05 203-SB04-11 203-SB04-14 203-SB05-05 203-SB05-21 H17-SB01-05 H17-SB02-05 H17-SB03-05 TB-SO-061616-01)	1,2-DIBROMO-3-CHLOROPROPAN 2-Butanone [MEK]	351 259	182 159	61.00-132.00 51.00-148.00	63.29 (25.00) 47.88 (25.00)	1,2-DIBROMO-3-CHLOROPROPAN 2-Butanone [MEK]	J(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06291 VOA11B LCSD 0629 (201-SB01-10 201-SB01-25 203-SB01-10 203-SB03-04 203-SB03-05 203-SB04-11 203-SB04-14 203-SB05-05 203-SB05-21 H17-SB01-05 H17-SB02-05 H17-SB03-05 TB-SO-061616-01)	ACETONE	0	0	36.00-164.00	-	ACETONE	J-(all detects) UJ(all non-detects)
VOA11B LCS 06291 VOA11B LCSD 0629 (201-SB01-10 201-SB01-25 203-SB01-10 203-SB03-04 203-SB03-05 203-SB04-11 203-SB04-14 203-SB05-05 203-SB05-21 H17-SB01-05 H17-SB02-05 H17-SB03-05 TB-SO-061616-01)	2-HEXANONE CHLOROMETHANE METHYLENE CHLORIDE	1450 - -	1230 142 155	53.00-145.00 50.00-136.00 70.00-128.00	- - -	2-HEXANONE CHLOROMETHANE METHYLENE CHLORIDE	J+(all detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0629 (203-SB05-21)	CHLOROETHANE	15.6	-	59.00-139.00	-	CHLOROETHANE	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0629 (203-SB05-21)	CHLOROMETHANE METHYLENE CHLORIDE	140 133	- -	50.00-136.00 70.00-128.00	- -	CHLOROMETHANE METHYLENE CHLORIDE	J+(all detects)

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-SO-061616-01(Initial)	6/16/2016 8:05:00 AM	2-HEXANONE CHLOROMETHANE METHYLENE CHLORIDE	0.033 mg/Kg 0.0016 mg/Kg 0.0096 mg/Kg	201-SB01-10 201-SB01-25 203-SB01-10 203-SB01-12 203-SB02-02 203-SB03-04 203-SB03-05 203-SB04-11 203-SB04-14 203-SB05-05 203-SB05-21 H17-SB01-05 H17-SB02-05 H17-SB03-05 WDS-SB18-12 WDS-SB19-12

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
201-SB01-10(Initial)	CHLOROMETHANE	0.0018 mg/Kg	0.0018U mg/Kg
201-SB01-10(Initial)	METHYLENE CHLORIDE	0.0065 mg/Kg	0.0065U mg/Kg
201-SB01-25(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
201-SB01-25(Initial)	METHYLENE CHLORIDE	0.0032 mg/Kg	0.0051U mg/Kg
203-SB01-10(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
203-SB03-04(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
203-SB03-05(Initial)	CHLOROMETHANE	0.0013 mg/Kg	0.0013U mg/Kg
203-SB04-11(Initial)	CHLOROMETHANE	0.0012 mg/Kg	0.0012U mg/Kg
203-SB04-14(Initial)	CHLOROMETHANE	0.0011 mg/Kg	0.0011U mg/Kg
203-SB04-14(Initial)	METHYLENE CHLORIDE	0.00090 mg/Kg	0.0042U mg/Kg
203-SB05-05(Initial)	CHLOROMETHANE	0.0013 mg/Kg	0.0013U mg/Kg
203-SB05-21(Initial)	CHLOROMETHANE	0.0015 mg/Kg	0.0015U mg/Kg
H17-SB01-05(Initial)	CHLOROMETHANE	0.0012 mg/Kg	0.0012U mg/Kg
H17-SB01-05(Initial)	METHYLENE CHLORIDE	0.0012 mg/Kg	0.0046U mg/Kg
H17-SB02-05(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
H17-SB02-05(Initial)	METHYLENE CHLORIDE	0.0011 mg/Kg	0.0051U mg/Kg
H17-SB03-05(Initial)	CHLOROMETHANE	0.0014 mg/Kg	0.0014U mg/Kg
WDS-SB19-12(Initial)	METHYLENE CHLORIDE	0.0033 mg/Kg	0.0048U mg/Kg

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
201-SB01-10	ARSENIC	J	1.3	1.4	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.030	0.18	LOQ	mg/Kg	
	LEAD	J	1.1	3.5	LOQ	mg/Kg	
201-SB01-25	BERYLLIUM	J	0.014	0.17	LOQ	mg/Kg	J (all detects)
	LEAD	J	0.97	3.4	LOQ	mg/Kg	
203-SB01-10	BERYLLIUM	J	0.051	0.17	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.7	3.5	LOQ	mg/Kg	
203-SB01-12	BERYLLIUM	J	0.11	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.055	0.18	LOQ	mg/Kg	
	LEAD	J	2.2	3.5	LOQ	mg/Kg	
203-SB02-02	BERYLLIUM	J	0.15	0.17	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.3	3.4	LOQ	mg/Kg	
203-SB03-04	BERYLLIUM	J	0.060	0.17	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.8	3.4	LOQ	mg/Kg	
203-SB03-05	BERYLLIUM	J	0.14	0.17	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.031	0.17	LOQ	mg/Kg	
	LEAD	J	3.0	3.4	LOQ	mg/Kg	
203-SB04-11	LEAD	J	3.1	3.6	LOQ	mg/Kg	J (all detects)
203-SB04-14	ARSENIC	J	1.1	1.3	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.084	0.17	LOQ	mg/Kg	
	CADMIUM	J	0.023	0.17	LOQ	mg/Kg	
	LEAD	J	2.8	3.4	LOQ	mg/Kg	
203-SB05-05	BERYLLIUM	J	0.11	0.19	LOQ	mg/Kg	J (all detects)
203-SB05-21	ARSENIC	J	1.6	1.7	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.032	0.22	LOQ	mg/Kg	
	LEAD	J	3.5	4.3	LOQ	mg/Kg	
H17-SB01-05	CADMIUM	J	0.031	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.2	3.6	LOQ	mg/Kg	
H17-SB02-05	BERYLLIUM	J	0.084	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.055	0.19	LOQ	mg/Kg	
	LEAD	J	3.5	3.8	LOQ	mg/Kg	
H17-SB03-05	BERYLLIUM	J	0.13	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.060	0.18	LOQ	mg/Kg	
WDS-SB18-12	ARSENIC	J	1.2	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.067	0.18	LOQ	mg/Kg	
	CADMIUM	J	0.025	0.18	LOQ	mg/Kg	
	LEAD	J	1.9	3.6	LOQ	mg/Kg	
WDS-SB19-12	ARSENIC	J	0.95	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.025	0.18	LOQ	mg/Kg	
	LEAD	J	0.61	3.7	LOQ	mg/Kg	
	NICKEL	J	2.2	3.7	LOQ	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606652

Laboratory: RTILABS

EDD Filename: EDD_1606652_SEDD_2a_v15_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
201-SB01-10	THALLIUM	J	0.062	0.14	LOQ	mg/Kg	J (all detects)
201-SB01-25	THALLIUM	J	0.077	0.13	LOQ	mg/Kg	J (all detects)
203-SB01-10	THALLIUM	J	0.13	0.14	LOQ	mg/Kg	J (all detects)
203-SB01-12	THALLIUM	J	0.13	0.15	LOQ	mg/Kg	J (all detects)
203-SB02-02	THALLIUM	J	0.12	0.14	LOQ	mg/Kg	J (all detects)
203-SB03-05	THALLIUM	J	0.11	0.14	LOQ	mg/Kg	J (all detects)
H17-SB01-05	THALLIUM	J	0.089	0.15	LOQ	mg/Kg	J (all detects)
H17-SB02-05	THALLIUM	J	0.090	0.15	LOQ	mg/Kg	J (all detects)
H17-SB03-05	THALLIUM	J	0.12	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB18-12	THALLIUM	J	0.099	0.14	LOQ	mg/Kg	J (all detects)

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
201-SB01-25	ACETONE	JQ	0.0023	0.010	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	JQ	0.0032	0.0051	LOQ	mg/Kg	J (all detects)
203-SB03-04	ACETONE	JQ	0.0058	0.0093	LOQ	mg/Kg	J (all detects)
203-SB04-11	ACETONE	JQ	0.0060	0.0097	LOQ	mg/Kg	J (all detects)
203-SB04-14	METHYLENE CHLORIDE	JQ	0.00090	0.0042	LOQ	mg/Kg	J (all detects)
H17-SB01-05	METHYLENE CHLORIDE	JQ	0.0012	0.0046	LOQ	mg/Kg	J (all detects)
H17-SB02-05	2-Butanone [MEK]	JQ	0.0064	0.020	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	JQ	0.0011	0.0051	LOQ	mg/Kg	J (all detects)
WDS-SB18-12	ACETONE	JZ	0.0020	0.0089	LOQ	mg/Kg	J (all detects)
WDS-SB19-12	CARBON DISULFIDE	J	0.00082	0.00096	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	JBQ	0.0033	0.0048	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB04-11	3-NITROANILINE	J	0.014	0.35	LOQ	mg/Kg	J (all detects)
203-SB05-05	BENZOIC ACID	JYQZ	0.50	1.1	LOQ	mg/Kg	J (all detects)
203-SB05-21	CARBAZOLE	JX	0.18	0.21	LOQ	mg/Kg	J (all detects)
H17-SB01-05	DI-N-OCTYL PHTHALATE	JX	0.020	0.18	LOQ	mg/Kg	J (all detects)
WDS-SB19-12	CARBAZOLE	J	0.12	0.18	LOQ	mg/Kg	J (all detects)
	DIBENZOFURAN	J	0.069	0.18	LOQ	mg/Kg	J (all detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606675		
Date(s) of Collection:	June 17 th , 2016 – June 19 th , 2016		
Number/Type Samples & Analyses:	11 groundwater samples and 4 trip blanks for a project-specific list of VOCs, SVOCs, PCBs, energetics, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 30, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for ground water data included in Sample Delivery Group (SDG) 1606675. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A			Matrix: Water						

Sample ID: 034-SB01-GW		Collected: 6/19/2016 9:47:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	1.3	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: 203-SB01-GW		Collected: 6/20/2016 11:15:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.28	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
SELENIUM	2.5	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.42	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: H16-SB01-GW		Collected: 6/19/2016 2:45:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.4	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.59	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: H21-SB01-GW		Collected: 6/19/2016 12:30:00 PM			Analysis Type: Dilution-1/TOT			Dilution: 50	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	4700		25	LOD	500	LOQ	ug/L	J+	Ms
SODIUM	21000		1200	LOD	5000	LOQ	ug/L	J-	Ms

Sample ID: H21-SB01-GW		Collected: 6/19/2016 12:30:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	6.3	J	0.50	LOD	10	LOQ	ug/L	J	RI
MAGNESIUM	4500	X	120	LOD	500	LOQ	ug/L	J-	Ms
ZINC	11	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: H21-SB01-GW		Collected: 6/19/2016 12:30:00 PM			Analysis Type: Reanalysis-1/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	4.1	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
NICKEL	9.8	J	0.50	LOD	10	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A	Matrix: Water

Sample ID: H21-SB02-GW		Collected: 6/19/2016 10:00:00 AM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	1.3	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: H21-SB03-GW		Collected: 6/19/2016 2:00:00 PM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.86	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.94	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB09-GW		Collected: 6/17/2016 11:15:00 AM		Analysis Type: Reanalysis-1/TOT				Dilution: 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	43	J	50	LOD	100	LOQ	ug/L	J	RI

Sample ID: WDS-SB11-GW		Collected: 6/17/2016 1:30:00 PM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.48	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
SELENIUM	3.3	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.52	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Method Category:	METALS	
Method:	6020A-SA	Matrix: Water

Sample ID: 034-SB01-GW		Collected: 6/19/2016 9:47:00 AM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.2	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.74	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID: 203-SB01-GW		Collected: 6/20/2016 11:15:00 AM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.23	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-SA	Matrix: Water

Sample ID:H16-SB01-GW		6/19/2016 2:45:00		Analysis Type: Initial/TOT				Dilution: 5	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.68	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.74	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID:H21-SB02-GW		6/19/2016 10:00:00		Analysis Type: Initial/TOT				Dilution: 5	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.60	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.43	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID:H21-SB03-GW		6/19/2016 2:00:00		Analysis Type: Initial/TOT				Dilution: 5	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.34	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.29	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID:WDS-SB06-GW		6/17/2016 2:20:00		Analysis Type: Initial/TOT				Dilution: 5	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.94	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.34	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID:WDS-SB07-GW		6/19/2016 11:15:00		Analysis Type: Initial/TOT				Dilution: 5	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.66	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.88	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID:WDS-SB09-GW		6/17/2016 11:15:00		Analysis Type: Initial/TOT				Dilution: 5	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.9	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-SA	Matrix:		Water						

Sample ID: WDS-SB11-GW		Collected: 6/17/2016 1:30:00 PM			Analysis Type: Initial/TOT			Dilution: 5		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	1.0	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI	
SILVER	0.28	J	0.50	LOD	1.5	LOQ	ug/L	J	RI	

Method Category:	SVOA									
Method:	8082A	Matrix:		Water						

Sample ID: 034-SB01-GW		Collected: 6/19/2016 9:47:00 AM			Analysis Type: Initial/TOT			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	
AROCLOR 1221	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	
AROCLOR 1232	0.038	U	0.038	LOD	0.19	LOQ	ug/L	UJ	Surr	
AROCLOR 1242	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr	
AROCLOR 1248	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	
AROCLOR 1254	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr	
AROCLOR 1260	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr	
Aroclor 1262	0.093	U	0.093	LOD	0.19	LOQ	ug/L	UJ	Surr	
Aroclor 1268	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	

Sample ID: H16-SB01-GW		Collected: 6/19/2016 2:45:00 PM			Analysis Type: Reanalysis-1/TOT			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
AROCLOR 1016	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	
AROCLOR 1221	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	
AROCLOR 1232	0.038	U	0.038	LOD	0.19	LOQ	ug/L	UJ	Surr	
AROCLOR 1242	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr	
AROCLOR 1248	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	
AROCLOR 1254	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr	
AROCLOR 1260	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr	
Aroclor 1262	0.093	U	0.093	LOD	0.19	LOQ	ug/L	UJ	Surr	
Aroclor 1268	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr	

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8082A	Matrix:	Water						

Sample ID: WDS-SB07-GW Collected: 6/19/2016 11:15:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.043	U	0.043	LOD	0.11	LOQ	ug/L	UJ	Surr
AROCLOR 1221	0.043	U	0.043	LOD	0.11	LOQ	ug/L	UJ	Surr
AROCLOR 1232	0.044	U	0.044	LOD	0.22	LOQ	ug/L	UJ	Surr
AROCLOR 1242	0.043	U	0.043	LOD	0.22	LOQ	ug/L	UJ	Surr
AROCLOR 1248	0.043	U	0.043	LOD	0.11	LOQ	ug/L	UJ	Surr
AROCLOR 1254	0.043	U	0.043	LOD	0.22	LOQ	ug/L	UJ	Surr
AROCLOR 1260	0.043	U	0.043	LOD	0.22	LOQ	ug/L	UJ	Surr
Aroclor 1262	0.11	U	0.11	LOD	0.22	LOQ	ug/L	UJ	Surr
Aroclor 1268	0.043	U	0.043	LOD	0.11	LOQ	ug/L	UJ	Surr

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Water						

Sample ID: 034-SB01-GW Collected: 6/19/2016 9:47:00 AM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.11		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
2-METHYLNAPHTHALENE	0.20		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
BENZO(B)FLUORANTHENE	0.037		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
FLUORANTHENE	0.035		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
FLUORENE	0.071		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
NAPHTHALENE	0.095		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
PHENANTHRENE	0.051		0.019	LOD	0.019	LOQ	ug/L	J+	Surr
PYRENE	0.031		0.019	LOD	0.019	LOQ	ug/L	J+	Surr

Sample ID: H21-SB01-GW Collected: 6/19/2016 12:30:00 PM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.026		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
2-METHYLNAPHTHALENE	0.041		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
BENZ(A)ANTHRACENE	0.059		0.020	LOD	0.020	LOQ	ug/L	J+	Lcs, Surr
BENZO(A)PYRENE	0.039		0.020	LOD	0.020	LOQ	ug/L	J+	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Water

Sample ID:H21-SB01-GW		6/19/2016 12:30:00		Initial/TOT-BASE/				Dilution: 1	
		Collected: PM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.074		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
BENZO(K)FLUORANTHENE	0.037		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
CHRYSENE	0.049		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
FLUORANTHENE	0.060		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
FLUORENE	0.025		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
NAPHTHALENE	0.046		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
PHENANTHRENE	0.040		0.020	LOD	0.020	LOQ	ug/L	J+	Surr
PYRENE	0.053		0.020	LOD	0.020	LOQ	ug/L	J+	Surr

Sample ID:WDS-SB06-GW		6/17/2016 2:20:00		Initial/TOT-BASE/				Dilution: 1	
		Collected: PM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.20		0.019	LOD	0.019	LOQ	ug/L	J+	Lcs

Sample ID:WDS-SB07-GW		6/19/2016 11:15:00		Initial/TOT-BASE/				Dilution: 1	
		Collected: AM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.059		0.020	LOD	0.020	LOQ	ug/L	J+	Lcs

Sample ID:WDS-SB09-GW		6/17/2016 11:15:00		Initial/TOT-BASE/				Dilution: 20	
		Collected: AM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.48		0.39	LOD	0.39	LOQ	ug/L	J+	Lcs

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Water

Sample ID:203-SB01-GW		6/20/2016 11:15:00		Initial/TOT-ACID				Dilution: 1	
		Collected: AM		Analysis Type: Initial/TOT-ACID					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	10	UQ	10	LOD	25	LOQ	ug/L	UJ	Lcs, Lcs
BENZOIC ACID	10	UYQZ	10	LOD	25	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Water						

Sample ID: 203-SB01-GW		Collected: 6/20/2016 11:15:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PENTACHLOROPHENOL	2.5	UYQ	2.5	LOD	5.0	LOQ	ug/L	UJ	Lcs
PHENOL	0.50	UQ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs

Sample ID: 203-SB01-GW		Collected: 6/20/2016 11:15:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	0.50	UYZ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs
DIETHYL PHTHALATE	0.19	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.50	UYQ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs

Sample ID: H16-SB01-GW		Collected: 6/19/2016 2:45:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.4	JYQZ	2.4	LOD	24	LOQ	ug/L	J	RI, Lcs
PHENOL	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: H16-SB01-GW		Collected: 6/19/2016 2:45:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: H21-SB01-GW		Collected: 6/19/2016 12:30:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.7	UQ	9.7	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
BENZOIC ACID	9.7	UYQZ	9.7	LOD	24	LOQ	ug/L	UJ	Lcs
PENTACHLOROPHENOL	2.4	UYQ	2.4	LOD	4.9	LOQ	ug/L	UJ	Lcs
PHENOL	0.49	UQ	0.49	LOD	4.9	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: H21-SB01-GW		Collected: 6/19/2016 12:30:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	0.49	UYZ	0.49	LOD	4.9	LOQ	ug/L	UJ	Lcs
DIETHYL PHTHALATE	0.49	J	0.49	LOD	4.9	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.49	UYQ	0.49	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: H21-SB02-GW		Collected: 6/19/2016 10:00:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.97	UQ	0.97	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: H21-SB02-GW		Collected: 6/19/2016 10:00:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.97	UQ	0.97	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: H21-SB03-GW		Collected: 6/19/2016 2:00:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: H21-SB03-GW		Collected: 6/19/2016 2:00:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYL PHTHALATE	0.94	J	0.95	LOD	4.8	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB02-GW		Collected: 6/19/2016 8:15:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.6	UQ	9.6	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: MP-SB02-GW		Collected: AM		6/19/2016 8:15:00				Analysis Type: Initial/TOT-ACID	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	9.6	UYQZ	9.6	LOD	24	LOQ	ug/L	UJ	Lcs
PENTACHLOROPHENOL	2.4	UYQ	2.4	LOD	4.8	LOQ	ug/L	UJ	Lcs
PHENOL	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB02-GW		Collected: AM		6/19/2016 8:15:00				Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	0.48	UYZ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs
N-NITROSODIMETHYLAMINE	0.48	UYQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB06-GW		Collected: PM		6/17/2016 2:20:00				Analysis Type: Initial/TOT-ACID	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	19	JYQZ	2.4	LOD	24	LOQ	ug/L	J	RI, Lcs
PHENOL	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB06-GW		Collected: PM		6/17/2016 2:20:00				Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBAZOLE	2.1	J	0.94	LOD	4.7	LOQ	ug/L	J	RI
DIBENZOFURAN	1.6	J	0.94	LOD	3.8	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB07-GW		Collected: AM		6/19/2016 11:15:00				Analysis Type: Initial/TOT-ACID	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	10	UQ	10	LOD	25	LOQ	ug/L	UJ	Lcs, Lcs
BENZOIC ACID	9.5	JYQZ	10	LOD	25	LOQ	ug/L	J	RI, Lcs
PENTACHLOROPHENOL	2.5	UYQ	2.5	LOD	5.0	LOQ	ug/L	UJ	Lcs
PHENOL	0.50	UQ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Water						

Sample ID: WDS-SB07-GW		Collected: 6/19/2016 11:15:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	0.50	UYZ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs
N-NITROSODIMETHYLAMINE	0.50	UYQ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB09-GW		Collected: 6/17/2016 11:15:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.5	UQ	2.5	LOD	25	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.5	UYQZ	2.5	LOD	25	LOQ	ug/L	UJ	Lcs
PHENOL	0.98	UQ	0.98	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB09-GW		Collected: 6/17/2016 11:15:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.98	UQ	0.98	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB11-GW		Collected: 6/17/2016 1:30:00 PM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	8.8	JYQZ	2.4	LOD	24	LOQ	ug/L	J	RI, Lcs
PHENOL	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB11-GW		Collected: 6/17/2016 1:30:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID: 203-SB01-GW		Collected: 6/20/2016 11:15:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	5.1	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: H16-SB01-GW		Collected: 6/19/2016 2:45:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	2.1	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: H21-SB01-GW		Collected: 6/19/2016 12:30:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	3.6	J	5.0	LOD	10	LOQ	ug/L	J	RI
ACETONE	3.6	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: H21-SB02-GW		Collected: 6/19/2016 10:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.3	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: H21-SB03-GW		Collected: 6/19/2016 2:00:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-HEXANONE	1.4	J	1.0	LOD	2.0	LOQ	ug/L	J	RI
ACETONE	8.0	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: MP-SB02-GW		Collected: 6/19/2016 8:15:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	5.9	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: TB-GW-061716-03		Collected: 6/17/2016 8:20:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	1.5	JY	0.60	LOD	10	LOQ	ug/L	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C
Matrix: Water

Sample ID: TB-GW-061916-01		Collected: 6/19/2016 8:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	5.8	JY	0.60	LOD	10	LOQ	ug/L	J	RI

Sample ID: TB-GW-061916-02		Collected: 6/19/2016 8:10:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	1.7	JY	0.60	LOD	10	LOQ	ug/L	J	RI

Sample ID: TB-GW-062016-01		Collected: 6/20/2016 8:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.7	J	0.60	LOD	10	LOQ	ug/L	J	RI

Sample ID: WDS-SB06-GW		Collected: 6/17/2016 2:20:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.1	J	0.60	LOD	10	LOQ	ug/L	U	Tb

Sample ID: WDS-SB07-GW		Collected: 6/19/2016 11:15:00 AM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,1,1-TRICHLOROETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,1,2,2-TETRACHLOROETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,1,2-TRICHLOROETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,1-DICHLOROETHANE	5.0	UH	5.0	LOD	10	LOQ	ug/L	UJ	StoA
1,1-DICHLOROETHENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,2,3-TRICHLOROPROPANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,2-DIBROMO-3-CHLOROPROPANE	10	UZH	10	LOD	25	LOQ	ug/L	UJ	StoA
1,2-DIBROMOETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,2-DICHLOROETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
1,2-DICHLOROPROPANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
2-Butanone [MEK]	25	UH	25	LOD	50	LOQ	ug/L	UJ	StoA
2-HEXANONE	5.0	UH	5.0	LOD	10	LOQ	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID: WDS-SB07-GW Collected: 6/19/2016 11:15:00 AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.0	UH	3.0	LOD	50	LOQ	ug/L	UJ	StoA
BENZENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
BROMODICHLOROMETHANE	3.0	UQXH	3.0	LOD	5.0	LOQ	ug/L	UJ	Ms, Lcs, StoA
BROMOFORM	3.0	UXZH	3.0	LOD	5.0	LOQ	ug/L	UJ	Ms, StoA
CARBON DISULFIDE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
CARBON TETRACHLORIDE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
CHLOROBENZENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
CHLORODIBROMOMETHANE	3.0	UQXH	3.0	LOD	5.0	LOQ	ug/L	UJ	Ms, Lcs, StoA
CHLOROETHANE	5.0	UH	5.0	LOD	10	LOQ	ug/L	UJ	StoA
CHLOROFORM	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
CHLOROMETHANE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
CIS-1,2-DICHLOROETHENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
CIS-1,3-DICHLOROPROPENE	3.0	UXH	3.0	LOD	5.0	LOQ	ug/L	UJ	Ms, StoA
Dichlorodifluoromethane [Freon-12]	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
ETHYLBENZENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
METHYLENE CHLORIDE	3.4	JH	3.0	LOD	25	LOQ	ug/L	UJ	Mb, StoA
STYRENE	3.0	UQXH	3.0	LOD	5.0	LOQ	ug/L	UJ	Ms, Lcs, StoA
TETRACHLOROETHENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
TOLUENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
TRANS-1,2-DICHLOROETHENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
TRANS-1,3-DICHLOROPROPENE	3.0	UZH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
TRICHLOROETHENE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
Trichlorofluoromethane [Freon-11]	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
VINYL ACETATE	3.0	UH	3.0	LOD	25	LOQ	ug/L	UJ	StoA
VINYL CHLORIDE	3.0	UH	3.0	LOD	5.0	LOQ	ug/L	UJ	StoA
Xylene (Total)	9.0	UH	9.0	LOD	15	LOQ	ug/L	UJ	StoA

Sample ID: WDS-SB11-GW Collected: 6/17/2016 1:30:00 PM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	2.5	J	0.60	LOD	10	LOQ	ug/L	U	Tb

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606675

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606675
EDD Filename: EDD_1606675_SEDD_2a_v3_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8260C Preparation Method: 5030B
Matrix: Water

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB07-GW (Initial/TOT)	Sampling To Analysis	23.00	14.00	DAYS	J- (all detects)
WDS-SB07-GWMS (Initial/TOT)		23.00	14.00	DAYS	UJ (all non-detects)
WDS-SB07-GWMSD (Initial/TOT)		23.00	14.00	DAYS	

Method Blank Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0712	7/12/2016 3:16:00 PM	ACETONE METHYLENE CHLORIDE	2.0 ug/L 0.48 ug/L	WDS-SB07-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
WDS-SB07-GW(Initial/TOT)	METHYLENE CHLORIDE	3.4 ug/L	25U ug/L

Method: 8330B

Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40253	6/30/2016 12:23:36 AM	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.7 ug/L	MP-SB02-GW

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
034-SB01-GW (Initial/TOT)	DECACHLOROBIPHENYL	28.9	40.00-135.00	All Target Analytes	J- (all detects) UJ (all non-detects)
H16-SB01-GW (Reanalysis-1/TOT)	DECACHLOROBIPHENYL	16.8	40.00-135.00	All Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB07-GW (Initial/TOT)	DECACHLOROBIPHENYL	23.1	40.00-135.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
034-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL	149	44.00-119.00	All Base/Neutral Target Analytes	J+(all detects)
	Nitrobenzene-d5	182	44.00-120.00		
	Terphenyl-d14	162	50.00-134.00		
203-SB01-GW (Initial/TOT)	Terphenyl-d14	225	50.00-134.00	All Base/Neutral Target Analytes	J+(all detects)
H21-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL	129	44.00-119.00	All Base/Neutral Target Analytes	J+(all detects)
	Nitrobenzene-d5	140	44.00-120.00		
	Terphenyl-d14	168	50.00-134.00		
H21-SB02-GW (Initial/TOT)	Terphenyl-d14	256	50.00-134.00	All Base/Neutral Target Analytes	J+(all detects)
H21-SB03-GW (Initial/TOT)	Terphenyl-d14	190	50.00-134.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB01-GW (Initial/TOT)	PHENOL-D5	21	30.00-130.00	No Affected Compounds	
H16-SB01-GW (Initial/TOT)	PHENOL-D5	24.5	30.00-130.00	No Affected Compounds	
H21-SB01-GW (Initial/TOT)	PHENOL-D5	18.1	30.00-130.00	No Affected Compounds	
H21-SB02-GW (Initial/TOT)	PHENOL-D5	22.2	30.00-130.00	No Affected Compounds	
H21-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL	43.4	44.00-119.00	No Affected Compounds	
	PHENOL-D5	17.7	30.00-130.00		
MP-SB02-GW (Initial/TOT)	PHENOL-D5	20.2	30.00-130.00	No Affected Compounds	
WDS-SB06-GW (Initial/TOT)	PHENOL-D5	19.1	30.00-130.00	No Affected Compounds	
	Terphenyl-d14	31.8	50.00-134.00		
WDS-SB07-GW (Initial/TOT)	PHENOL-D5	22.7	30.00-130.00	No Affected Compounds	

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

Surrogate Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB09-GW (Initial/TOT)	PHENOL-D5	25	30.00-130.00	No Affected Compounds	
WDS-SB11-GW (Initial/TOT)	PHENOL-D5	17.5	30.00-130.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A

Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H21-SB01-GWMSD (Total) (H21-SB01-GW)	MAGNESIUM SODIUM	- -	81.9 67.2	83.00-118.00 85.00-117.00	- -	MAGNESIUM SODIUM	J- (all detects) UJ (all non-detects)
H21-SB01-GWMS (Total) H21-SB01-GWMSD (Total) (H21-SB01-GW)	ALUMINUM	540	604	84.00-117.00	-	ALUMINUM	J+(all detects)

Method: 8260C

Matrix: Water

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB07-GWMS WDS-SB07-GWMSD (WDS-SB07-GW)	BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE	78.7 64.2 73.4 74.2 74.1	77.9 - 72.6 73.2 75.1	79.00-125.00 66.00-130.00 74.00-126.00 75.00-124.00 78.00-123.00	- - - - -	BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40220 LCSD-40220 (H16-SB01-GW H21-SB02-GW H21-SB03-GW WDS-SB06-GW WDS-SB09-GW WDS-SB11-GW)	4-NITROPHENOL BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	30 - 34.9 31.6	35.3 47.9 36.2 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40233 (034-SB01-GW 203-SB01-GW H16-SB01-GW H21-SB01-GW H21-SB02-GW H21-SB03-GW MP-SB02-GW WDS-SB06-GW WDS-SB07-GW WDS-SB09-GW WDS-SB11-GW)	BENZ(A)ANTHRACENE	123	-	59.00-120.00	-	BENZ(A)ANTHRACENE	J+(all detects)

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40235 LCSD-40235 (203-SB01-GW H21-SB01-GW MP-SB02-GW WDS-SB07-GW)	4-NITROPHENOL	13.4	22.3	50.00-130.00	49.75 (25.00)	4-NITROPHENOL	J(all detects) UJ(all non-detects)
LCS-40235 LCSD-40235 (203-SB01-GW H21-SB01-GW MP-SB02-GW WDS-SB07-GW)	BENZOIC ACID BIS(2-CHLOROISOPROPYL)ETHE N-NITROSODIMETHYLAMINE PENTACHLOROPHENOL PHENOL	12.1 49.6 23.8 14.5 18.8	12.2 48.3 25.8 15 20.2	50.00-130.00 50.00-130.00 50.00-130.00 35.00-138.00 34.00-121.00	- - - - -	BENZOIC ACID BIS(2-CHLOROISOPROPYL)ETH N-NITROSODIMETHYLAMINE PENTACHLOROPHENOL PHENOL	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA10 LCS 063016 VOA10 LCSD 06301 (203-SB01-GW H16-SB01-GW H21-SB01-GW H21-SB02-GW H21-SB03-GW MP-SB02-GW TB-GW-062016-01 WDS-SB06-GW WDS-SB09-GW WDS-SB11-GW)	METHYLENE CHLORIDE	133	128	74.00-124.00	-	METHYLENE CHLORIDE	J+(all detects)
VOA11B LCS 07121 (WDS-SB07-GW)	BROMODICHLOROMETHANE CHLORODIBROMOMETHANE STYRENE	77.9 70.9 74.8	- - -	79.00-125.00 74.00-126.00 78.00-123.00	- - -	BROMODICHLOROMETHANE CHLORODIBROMOMETHANE STYRENE	J-(all detects) UJ(all non-detects)

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-061716-03(Initial/TOT)	6/17/2016 8:20:00 AM	ACETONE	1.5 ug/L	WDS-SB06-GW WDS-SB09-GW WDS-SB11-GW
TB-GW-061916-01(Initial/TOT)	6/19/2016 8:00:00 AM	ACETONE	5.8 ug/L	H16-SB01-GW H21-SB02-GW H21-SB03-GW MP-SB02-GW
TB-GW-061916-02(Initial/TOT)	6/19/2016 8:10:00 AM	ACETONE	1.7 ug/L	034-SB01-GW H21-SB01-GW WDS-SB07-GW
TB-GW-062016-01(Initial/TOT)	6/20/2016 8:00:00 AM	ACETONE	4.7 ug/L	203-SB01-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
203-SB01-GW(Initial/TOT)	ACETONE	5.1 ug/L	10U ug/L
H16-SB01-GW(Initial/TOT)	ACETONE	2.1 ug/L	10U ug/L
H21-SB01-GW(Initial/TOT)	ACETONE	3.6 ug/L	10U ug/L
H21-SB02-GW(Initial/TOT)	ACETONE	3.3 ug/L	10U ug/L
H21-SB03-GW(Initial/TOT)	ACETONE	8.0 ug/L	10U ug/L
MP-SB02-GW(Initial/TOT)	ACETONE	5.9 ug/L	10U ug/L
WDS-SB06-GW(Initial/TOT)	ACETONE	7.1 ug/L	10U ug/L
WDS-SB11-GW(Initial/TOT)	ACETONE	2.5 ug/L	10U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
034-SB01-GW	THALLIUM	J	1.3	2.0	LOQ	ug/L	J (all detects)
203-SB01-GW	BERYLLIUM	J	0.28	1.0	LOQ	ug/L	J (all detects)
	SELENIUM	J	2.5	5.0	LOQ	ug/L	
	THALLIUM	J	0.42	2.0	LOQ	ug/L	
H16-SB01-GW	SELENIUM	J	4.4	5.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.59	2.0	LOQ	ug/L	
H21-SB01-GW	CHROMIUM	J	6.3	10	LOQ	ug/L	J (all detects)
	COPPER	J	4.1	5.0	LOQ	ug/L	
	NICKEL	J	9.8	10	LOQ	ug/L	
	ZINC	J	11	50	LOQ	ug/L	
H21-SB02-GW	THALLIUM	J	1.3	2.0	LOQ	ug/L	J (all detects)
H21-SB03-GW	CADMIUM	J	0.86	1.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.94	2.0	LOQ	ug/L	
WDS-SB09-GW	BERYLLIUM	J	43	100	LOQ	ug/L	J (all detects)
WDS-SB11-GW	CADMIUM	J	0.48	1.0	LOQ	ug/L	J (all detects)
	SELENIUM	J	3.3	5.0	LOQ	ug/L	
	THALLIUM	J	0.52	2.0	LOQ	ug/L	

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
034-SB01-GW	ANTIMONY	JG	1.2	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.74	1.5	LOQ	ug/L	
203-SB01-GW	ANTIMONY	JG	0.23	2.5	LOQ	ug/L	J (all detects)
H16-SB01-GW	ANTIMONY	JG	0.68	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.74	1.5	LOQ	ug/L	
H21-SB02-GW	ANTIMONY	JG	0.60	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.43	1.5	LOQ	ug/L	
H21-SB03-GW	ANTIMONY	JG	0.34	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.29	1.5	LOQ	ug/L	
WDS-SB06-GW	ANTIMONY	JG	0.94	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.34	1.5	LOQ	ug/L	
WDS-SB07-GW	ANTIMONY	JG	0.66	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.88	1.5	LOQ	ug/L	
WDS-SB09-GW	ANTIMONY	JG	1.9	2.5	LOQ	ug/L	J (all detects)
WDS-SB11-GW	ANTIMONY	JG	1.0	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.28	1.5	LOQ	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606675

Laboratory: RTILABS

EDD Filename: EDD_1606675_SEDD_2a_v3_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB01-GW	ACETONE	J	5.1	10	LOQ	ug/L	J (all detects)
H16-SB01-GW	ACETONE	J	2.1	10	LOQ	ug/L	J (all detects)
H21-SB01-GW	2-Butanone [MEK]	J	3.6	10	LOQ	ug/L	J (all detects)
	ACETONE	J	3.6	10	LOQ	ug/L	
H21-SB02-GW	ACETONE	J	3.3	10	LOQ	ug/L	J (all detects)
H21-SB03-GW	2-HEXANONE	J	1.4	2.0	LOQ	ug/L	J (all detects)
	ACETONE	J	8.0	10	LOQ	ug/L	
MP-SB02-GW	ACETONE	J	5.9	10	LOQ	ug/L	J (all detects)
TB-GW-061716-03	ACETONE	JY	1.5	10	LOQ	ug/L	J (all detects)
TB-GW-061916-01	ACETONE	JY	5.8	10	LOQ	ug/L	J (all detects)
TB-GW-061916-02	ACETONE	JY	1.7	10	LOQ	ug/L	J (all detects)
TB-GW-062016-01	ACETONE	J	4.7	10	LOQ	ug/L	J (all detects)
WDS-SB06-GW	ACETONE	J	7.1	10	LOQ	ug/L	J (all detects)
WDS-SB07-GW	METHYLENE CHLORIDE	JH	3.4	25	LOQ	ug/L	J (all detects)
WDS-SB11-GW	ACETONE	J	2.5	10	LOQ	ug/L	J (all detects)

Method: 8270D-MOD
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB01-GW	DIETHYL PHTHALATE	J	0.19	5.0	LOQ	ug/L	J (all detects)
H16-SB01-GW	BENZOIC ACID	JYQZ	9.4	24	LOQ	ug/L	J (all detects)
H21-SB01-GW	DIETHYL PHTHALATE	J	0.49	4.9	LOQ	ug/L	J (all detects)
H21-SB03-GW	DIETHYL PHTHALATE	J	0.94	4.8	LOQ	ug/L	J (all detects)
WDS-SB06-GW	BENZOIC ACID	JYQZ	19	24	LOQ	ug/L	J (all detects)
	CARBAZOLE	J	2.1	4.7	LOQ	ug/L	
	DIBENZOFURAN	J	1.6	3.8	LOQ	ug/L	
WDS-SB07-GW	BENZOIC ACID	JYQZ	9.5	25	LOQ	ug/L	J (all detects)
WDS-SB11-GW	BENZOIC ACID	JYQZ	8.8	24	LOQ	ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606833		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	10 groundwater samples for a project-specific list of VOCs, SVOCs, PCBs, energetics, and metals		
Data Reviewer:	Devon Chicoine AECOM/Arlington, VA		
Completed:	August 22, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for ground water data included in Sample Delivery Group (SDG) 1606833. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- ✓ Field rinsate blank data
- ✗ Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✗ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A			Matrix: Water						

Sample ID: 203-SB02-GW		Collected: 6/20/2016 1:02:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.90	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.89	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: 203-SB03-GW		Collected: 6/20/2016 3:25:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.42	JG	0.50	LOD	1.0	LOQ	ug/L	J	RI
CHROMIUM	8.1	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	2.9	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
NICKEL	6.4	J	0.50	LOD	10	LOQ	ug/L	J	RI
SELENIUM	2.2	JG	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.70	JG	0.50	LOD	2.0	LOQ	ug/L	J	RI
ZINC	20	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: 203-SB04-GW		Collected: 6/20/2016 2:00:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.8	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	0.66	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
COPPER	1.8	JG	0.50	LOD	5.0	LOQ	ug/L	J	RI
LEAD	0.52	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
NICKEL	2.2	J	0.50	LOD	10	LOQ	ug/L	J	RI
SELENIUM	3.4	JG	2.5	LOD	5.0	LOQ	ug/L	J	RI
VANADIUM	2.7	J	0.50	LOD	4.0	LOQ	ug/L	J	RI
ZINC	6.2	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: 203-SB05-GW		Collected: 6/20/2016 10:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.35	JG	0.50	LOD	1.0	LOQ	ug/L	J	RI
CHROMIUM	6.9	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	3.4	J	0.50	LOD	5.0	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A			Matrix: Water						

Sample ID: 203-SB05-GW		Collected: 6/20/2016 10:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	6.9	J	0.50	LOD	10	LOQ	ug/L	J	RI
ZINC	25	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: H14-SB01-GW		Collected: 6/21/2016 12:30:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.46	JG	0.50	LOD	1.0	LOQ	ug/L	J	RI
SELENIUM	1.7	JG	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.17	JG	0.50	LOD	2.0	LOQ	ug/L	J	RI
ZINC	13	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: H14-SB03-GW		Collected: 6/21/2016 12:00:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.73	J	1.0	LOD	1.5	LOQ	ug/L	J	RI
COBALT	2.5	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
NICKEL	6.2	J	0.50	LOD	10	LOQ	ug/L	J	RI
ZINC	20	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: H17-SB03-GW		Collected: 6/21/2016 9:30:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.57	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.82	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: MP-MW01-01		Collected: 6/22/2016 10:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.2	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	1.0	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
NICKEL	1.9	J	0.50	LOD	10	LOQ	ug/L	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:		Water					

Sample ID: WDS-SB18-GW		Collected: 6/20/2016 9:35:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	4.2	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	4.2	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
COPPER	4.6	JG	0.50	LOD	5.0	LOQ	ug/L	J	RI
VANADIUM	3.6	J	0.50	LOD	4.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB19-GW		Collected: 6/20/2016 10:52:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.40	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.52	JG	0.50	LOD	2.0	LOQ	ug/L	J	RI

Method Category:	METALS								
Method:	6020A-SA	Matrix:		Water					

Sample ID: 203-SB02-GW		Collected: 6/20/2016 1:02:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.1	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: 203-SB03-GW		Collected: 6/20/2016 3:25:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.40	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: 203-SB04-GW		Collected: 6/20/2016 2:00:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.25	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: 203-SB05-GW		Collected: 6/20/2016 10:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.24	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-SA			Matrix: Water						

Sample ID: H17-SB03-GW		Collected: 6/21/2016 9:30:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.1	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: MP-MW01-01		Collected: 6/22/2016 10:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.0	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB18-GW		Collected: 6/20/2016 9:35:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.35	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB19-GW		Collected: 6/20/2016 10:52:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.48	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Method Category:	SVOA									
Method:	8082A			Matrix: Water						

Sample ID: 203-SB02-GW		Collected: 6/20/2016 1:02:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.040	U	0.040	LOD	0.10	LOQ	ug/L	UJ	Surr
AROCLOR 1221	0.040	U	0.040	LOD	0.10	LOQ	ug/L	UJ	Surr
AROCLOR 1232	0.041	U	0.041	LOD	0.20	LOQ	ug/L	UJ	Surr
AROCLOR 1242	0.040	U	0.040	LOD	0.20	LOQ	ug/L	UJ	Surr
AROCLOR 1248	0.040	U	0.040	LOD	0.10	LOQ	ug/L	UJ	Surr
AROCLOR 1254	0.040	U	0.040	LOD	0.20	LOQ	ug/L	UJ	Surr
AROCLOR 1260	0.040	U	0.040	LOD	0.20	LOQ	ug/L	UJ	Surr
Aroclor 1262	0.10	U	0.10	LOD	0.20	LOQ	ug/L	UJ	Surr
Aroclor 1268	0.040	U	0.040	LOD	0.10	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8082A	Matrix:	Water						

Sample ID:203-SB03-GW		Collected: 6/20/2016 3:25:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.041	U	0.041	LOD	0.10	LOQ	ug/L	UJ	Surr
AROCLOR 1221	0.041	U	0.041	LOD	0.10	LOQ	ug/L	UJ	Surr
AROCLOR 1232	0.042	U	0.042	LOD	0.20	LOQ	ug/L	UJ	Surr
AROCLOR 1242	0.041	U	0.041	LOD	0.20	LOQ	ug/L	UJ	Surr
AROCLOR 1248	0.041	U	0.041	LOD	0.10	LOQ	ug/L	UJ	Surr
AROCLOR 1254	0.041	U	0.041	LOD	0.20	LOQ	ug/L	UJ	Surr
AROCLOR 1260	0.041	U	0.041	LOD	0.20	LOQ	ug/L	UJ	Surr
Aroclor 1262	0.10	U	0.10	LOD	0.20	LOQ	ug/L	UJ	Surr
Aroclor 1268	0.041	U	0.041	LOD	0.10	LOQ	ug/L	UJ	Surr

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Water						

Sample ID:203-SB02-GW		Collected: 6/20/2016 1:02:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Lcs

Sample ID:203-SB03-GW		Collected: 6/20/2016 3:25:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Lcs

Sample ID:203-SB04-GW		Collected: 6/20/2016 2:00:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Lcs

Sample ID:203-SB05-GW		Collected: 6/20/2016 10:00:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.22		0.020	LOD	0.020	LOQ	ug/L	J	Surr, Surr

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Water

Sample ID:203-SB05-GW		6/20/2016 10:00:00		Initial/TOT-BASE/				Dilution: 1	
		Collected: AM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.21		0.020	LOD	0.020	LOQ	ug/L	J	Surr, Surr
BENZO(A)PYRENE	0.93		0.020	LOD	0.020	LOQ	ug/L	J	Surr, Surr
BENZO(G,H,I)PERYLENE	0.48		0.020	LOD	0.020	LOQ	ug/L	J	Surr, Surr
BENZO(K)FLUORANTHENE	0.57		0.020	LOD	0.020	LOQ	ug/L	J	Lcs, Surr, Surr
DIBENZO(A,H)ANTHRACENE	0.22		0.020	LOD	0.020	LOQ	ug/L	J	Surr, Surr
INDENO(1,2,3-CD)PYRENE	0.40		0.020	LOD	0.020	LOQ	ug/L	J	Surr, Surr

Sample ID:H14-SB01-GW		6/21/2016 12:30:00		Initial/TOT-BASE/				Dilution: 1	
		Collected: PM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.039		0.021	LOD	0.021	LOQ	ug/L	J-	Surr
2-METHYLNAPHTHALENE	0.048	G	0.021	LOD	0.021	LOQ	ug/L	J-	Surr
ACENAPHTHENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
ACENAPHTHYLENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
BENZ(A)ANTHRACENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
BENZO(A)PYRENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
BENZO(B)FLUORANTHENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
BENZO(G,H,I)PERYLENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
BENZO(K)FLUORANTHENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Lcs, Surr
CHRYSENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
DIBENZO(A,H)ANTHRACENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
FLUORENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
NAPHTHALENE	0.039	G	0.021	LOD	0.021	LOQ	ug/L	J-	Surr
PHENANTHRENE	0.021	UG	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr
PYRENE	0.021	U	0.021	LOD	0.021	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Water

Sample ID: H14-SB03-GW	Collected: 6/21/2016 12:00:00 PM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.022	U	0.022	LOD	0.022	LOQ	ug/L	UJ	Lcs

Sample ID: H17-SB03-GW	Collected: 6/21/2016 9:30:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.022	U	0.022	LOD	0.022	LOQ	ug/L	UJ	Lcs

Sample ID: MP-MW01-01	Collected: 6/22/2016 10:00:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB03-GW	Collected: 6/22/2016 9:35:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB18-GW	Collected: 6/20/2016 9:35:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	0.020	U	0.020	LOD	0.020	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB19-GW	Collected: 6/20/2016 10:52:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.057		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
2-METHYLNAPHTHALENE	0.081	G	0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ACENAPHTHENE	0.093		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ACENAPHTHYLENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
ANTHRACENE	0.058		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZ(A)ANTHRACENE	0.11		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(A)PYRENE	0.067		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(B)FLUORANTHENE	0.10		0.019	LOD	0.019	LOQ	ug/L	J-	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Water

Sample ID: WDS-SB19-GW		6/20/2016 10:52:00		Initial/TOT-BASE/		Dilution: 1			
		Collected: AM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	0.051		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(K)FLUORANTHENE	0.034		0.019	LOD	0.019	LOQ	ug/L	J	Lcs, Surr
CHRYSENE	0.062		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
FLUORANTHENE	0.19		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
FLUORENE	0.069		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
INDENO(1,2,3-CD)PYRENE	0.043		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
NAPHTHALENE	0.29	G	0.019	LOD	0.019	LOQ	ug/L	J-	Surr
PHENANTHRENE	0.33	G	0.019	LOD	0.019	LOQ	ug/L	J-	Surr
PYRENE	0.18		0.019	LOD	0.019	LOQ	ug/L	J-	Surr

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Water

Sample ID: 203-SB02-GW		6/20/2016 1:02:00		Initial/TOT-ACID		Dilution: 1			
		Collected: PM	Analysis Type: Initial/TOT-ACID						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.4	UYQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: 203-SB02-GW		6/20/2016 1:02:00		Initial/TOT-BASE/		Dilution: 1			
		Collected: PM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: 203-SB03-GW		6/20/2016 3:25:00		Initial/TOT-ACID		Dilution: 1			
		Collected: PM	Analysis Type: Initial/TOT-ACID						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	5.3	JYQ	2.4	LOD	24	LOQ	ug/L	J	RI, Lcs
PHENOL	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: 203-SB03-GW	Collected: 6/20/2016 3:25:00 PM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: 203-SB04-GW	Collected: 6/20/2016 2:00:00 PM	Analysis Type: Initial/TOT-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.9	UYQ	2.9	LOD	29	LOQ	ug/L	UJ	Lcs
PHENOL	1.1	UQ	1.1	LOD	5.7	LOQ	ug/L	UJ	Lcs

Sample ID: 203-SB04-GW	Collected: 6/20/2016 2:00:00 PM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	2.9	U	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	2.9	U	2.9	LOD	23	LOQ	ug/L	UJ	Surr
3-NITROANILINE	1.1	U	1.1	LOD	11	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	2.9	U	2.9	LOD	11	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	2.9	U	2.9	LOD	29	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	2.9	U	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	2.9	U	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	2.9	UYZ	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	2.9	U	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	1.1	U	1.1	LOD	4.6	LOQ	ug/L	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID:203-SB04-GW		6/20/2016 2:00:00			Initial/TOT-BASE/			Dilution: 1	
		Collected: PM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYL PHTHALATE	0.86	J	1.1	LOD	5.7	LOQ	ug/L	J	RI, Surr
DIMETHYL PHTHALATE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	2.9	U	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
ISOPHORONE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	2.9	U	2.9	LOD	3.4	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	1.1	UQ	1.1	LOD	5.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	2.9	U	2.9	LOD	5.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	1.1	U	1.1	LOD	5.7	LOQ	ug/L	UJ	Surr

Sample ID:203-SB05-GW		6/20/2016 10:00:00			Initial/TOT-ACID			Dilution: 1	
		Collected: AM			Analysis Type: Initial/TOT-ACID				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	4.3	UYQ	4.3	LOD	43	LOQ	ug/L	UJ	Lcs
PHENOL	1.7	UQ	1.7	LOD	8.6	LOQ	ug/L	UJ	Lcs

Sample ID:203-SB05-GW		6/20/2016 10:00:00			Initial/TOT-BASE/			Dilution: 1	
		Collected: AM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.7	UQ	1.7	LOD	8.6	LOQ	ug/L	UJ	Lcs

Sample ID:H17-SB03-GW		6/21/2016 9:30:00			Initial/TOT-ACID			Dilution: 1	
		Collected: AM			Analysis Type: Initial/TOT-ACID				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.7	UYQ	2.7	LOD	27	LOQ	ug/L	UJ	Lcs
PHENOL	1.1	UQ	1.1	LOD	5.5	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: H17-SB03-GW		Collected: 6/21/2016 9:30:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYL PHTHALATE	1.3	J	1.1	LOD	5.5	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	1.1	UQ	1.1	LOD	5.5	LOQ	ug/L	UJ	Lcs

Sample ID: MP-MW01-01		Collected: 6/22/2016 10:00:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.4	UYQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-MW01-01		Collected: 6/22/2016 10:00:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB03-GW		Collected: 6/22/2016 9:35:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.4	UYQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: MP-SB03-GW		Collected: 6/22/2016 9:35:00 AM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB18-GW		Collected: 6/20/2016 9:35:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.5	UYQ	2.5	LOD	25	LOQ	ug/L	UJ	Lcs
PHENOL	1.0	UQ	1.0	LOD	5.1	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D-MOD			Matrix: Water						

Sample ID: WDS-SB18-GW		Collected: 6/20/2016 9:35:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.0	UQ	1.0	LOD	5.1	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB19-GW		Collected: 6/20/2016 10:52:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	2.6	UYQ	2.6	LOD	26	LOQ	ug/L	UJ	Lcs
PHENOL	1.0	UQ	1.0	LOD	5.2	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB19-GW		Collected: 6/20/2016 10:52:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.0	UQ	1.0	LOD	5.2	LOQ	ug/L	UJ	Lcs

Method Category:	VOA									
Method:	8260C			Matrix: Water						

Sample ID: 203-SB02-GW		Collected: 6/20/2016 1:02:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	2.5	J	0.60	LOD	10	LOQ	ug/L	U	Tb
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.59	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb

Sample ID: 203-SB03-GW		Collected: 6/20/2016 3:25:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	5.4	J	0.60	LOD	10	LOQ	ug/L	U	Tb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID:203-SB03-GW		Collected: 6/20/2016 3:25:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.59	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb

Sample ID:203-SB04-GW		Collected: 6/20/2016 2:00:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
2-Butanone [MEK]	3.8	J	5.0	LOD	10	LOQ	ug/L	J	RI
ACETONE	9.5	J	0.60	LOD	10	LOQ	ug/L	U	Tb
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.47	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb

Sample ID:203-SB05-GW		Collected: 6/20/2016 10:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	33		0.60	LOD	10	LOQ	ug/L	U	Tb
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.31	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb

Sample ID:H17-SB03-GW		Collected: 6/21/2016 9:30:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	1.5	J	0.60	LOD	10	LOQ	ug/L	U	Tb
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID:H17-SB03-GW		6/21/2016 9:30:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
METHYLENE CHLORIDE	0.51	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb		

Sample ID:MP-MW01-01		6/22/2016 10:00:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	2.0	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb		
BROMOFORM	0.60	UQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CARBON DISULFIDE	0.75	J	0.60	LOD	1.0	LOQ	ug/L	J	RI		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLOROMETHANE	0.78	JB	0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb		
METHYLENE CHLORIDE	0.47	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb		

Sample ID:MP-SB03-GW		6/22/2016 9:35:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	2.7	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb		
BROMOFORM	0.60	UQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLOROMETHANE	0.76	JB	0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb		
METHYLENE CHLORIDE	0.48	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb		

Sample ID:TB-GW-062016-03		6/20/2016 8:20:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs		
ACETONE	5.2	J	0.60	LOD	10	LOQ	ug/L	J	RI		
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
METHYLENE CHLORIDE	0.63	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb		

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID: TB-GW-062116-01		6/21/2016 8:00:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs		
ACETONE	1.5	J	0.60	LOD	10	LOQ	ug/L	J	RI		
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
METHYLENE CHLORIDE	0.68	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb		

Sample ID: TB-GW-062216-01		6/22/2016 8:00:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	5.7	J	0.60	LOD	10	LOQ	ug/L	U	Mb		
BROMOFORM	0.60	UQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLOROMETHANE	0.86	JB	0.60	LOD	1.0	LOQ	ug/L	U	Mb		
METHYLENE CHLORIDE	0.61	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb		

Sample ID: WDS-SB18-GW		6/20/2016 9:35:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs		
ACETONE	7.3	J	0.60	LOD	10	LOQ	ug/L	U	Tb		
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
METHYLENE CHLORIDE	0.47	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb		

Sample ID: WDS-SB19-GW		6/20/2016 10:52:00		Collected: AM				Analysis Type: Initial/TOT		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3-TRICHLOROPROPANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs		
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs		
2-Butanone [MEK]	6.6	J	5.0	LOD	10	LOQ	ug/L	J	RI		

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID: WDS-SB19-GW Collected: 6/20/2016 10:52:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.9	J	0.60	LOD	10	LOQ	ug/L	U	Tb
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.41	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606833

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0701	7/1/2016 9:36:00 AM	METHYLENE CHLORIDE	0.80 ug/L	203-SB02-GW 203-SB03-GW 203-SB04-GW 203-SB05-GW H17-SB03-GW TB-GW-062016-03 TB-GW-062116-01 WDS-SB18-GW WDS-SB19-GW
VOA11B MBLK2 070	7/5/2016 12:59:00 PM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	1.6 ug/L 0.87 ug/L 0.86 ug/L	MP-MW01-01 MP-SB03-GW TB-GW-062216-01

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
203-SB02-GW (Initial/TOT)	METHYLENE CHLORIDE	0.59 ug/L	5.0U ug/L
203-SB03-GW (Initial/TOT)	METHYLENE CHLORIDE	0.59 ug/L	5.0U ug/L
203-SB04-GW (Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
203-SB05-GW (Initial/TOT)	METHYLENE CHLORIDE	0.31 ug/L	5.0U ug/L
H17-SB03-GW (Initial/TOT)	METHYLENE CHLORIDE	0.51 ug/L	5.0U ug/L
MP-MW01-01 (Initial/TOT)	ACETONE	2.0 ug/L	10U ug/L
MP-MW01-01 (Initial/TOT)	CHLOROMETHANE	0.78 ug/L	1.0U ug/L
MP-MW01-01 (Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
MP-SB03-GW (Initial/TOT)	ACETONE	2.7 ug/L	10U ug/L
MP-SB03-GW (Initial/TOT)	CHLOROMETHANE	0.76 ug/L	1.0U ug/L
MP-SB03-GW (Initial/TOT)	METHYLENE CHLORIDE	0.48 ug/L	5.0U ug/L
TB-GW-062016-03 (Initial/TOT)	METHYLENE CHLORIDE	0.63 ug/L	5.0U ug/L
TB-GW-062116-01 (Initial/TOT)	METHYLENE CHLORIDE	0.68 ug/L	5.0U ug/L
TB-GW-062216-01 (Initial/TOT)	ACETONE	5.7 ug/L	10U ug/L
TB-GW-062216-01 (Initial/TOT)	CHLOROMETHANE	0.86 ug/L	1.0U ug/L
TB-GW-062216-01 (Initial/TOT)	METHYLENE CHLORIDE	0.61 ug/L	5.0U ug/L
WDS-SB18-GW (Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
WDS-SB19-GW (Initial/TOT)	METHYLENE CHLORIDE	0.41 ug/L	5.0U ug/L

Method: 8330B
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40253	6/30/2016 12:23:36 AM	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.7 ug/L	EFO-SB01-GW MP-MW01-01 MP-SB03-GW MP-SB03-GW DUP

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB02-GW (Initial/TOT)	DECACHLOROBIPHENYL	21.4	40.00-135.00	All Target Analytes	J- (all detects) UJ (all non-detects)
203-SB03-GW (Initial/TOT)	DECACHLOROBIPHENYL	36.8	40.00-135.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB05-GW (Initial/TOT)	4-Bromofluorobenzene	141	85.00-114.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB05-GW (Initial/TOT)	2-FLUOROBIPHENYL Terphenyl-d14	19.7 7.27	44.00-119.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
203-SB05-GW (Initial/TOT)	Nitrobenzene-d5	708	44.00-120.00	All Base/Neutral Target Analytes	J+(all detects)
H14-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL Terphenyl-d14	39.7 48.9	44.00-119.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB19-GW (Initial/TOT)	2-FLUOROBIPHENYL	41.1	44.00-119.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
203-SB04-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5	34.4 28.2 19.3	44.00-119.00 44.00-120.00 30.00-130.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
MP-MW01-01 (Initial/TOT)	PHENOL-D5	28.1	30.00-130.00	No Affected Compounds	
MP-SB03-GW (Initial/TOT)	PHENOL-D5	28.6	30.00-130.00	No Affected Compounds	
WDS-SB18-GW (Initial/TOT)	PHENOL-D5	29.9	30.00-130.00	No Affected Compounds	

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSD-40256 (203-SB02-GW 203-SB03-GW 203-SB04-GW 203-SB05-GW H14-SB01-GW H14-SB03-GW H17-SB03-GW MP-MW01-01 MP-SB03-GW WDS-SB18-GW WDS-SB19-GW)	BENZO(K)FLUORANTHENE	-	-	54.00-125.00	20.07 (20.00)	BENZO(K)FLUORANTHENE	J (all detects) UJ (all non-detects)

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40262 (203-SB02-GW 203-SB03-GW 203-SB04-GW 203-SB05-GW H17-SB03-GW MP-MW01-01 MP-SB03-GW WDS-SB18-GW WDS-SB19-GW)	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	48.8 39.6 31.2	- - -	50.00-130.00 50.00-130.00 34.00-121.00	- - -	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 07011 VOA11B LCSD 0701 (203-SB02-GW 203-SB03-GW 203-SB04-GW 203-SB05-GW H17-SB03-GW TB-GW-062016-03 TB-GW-062116-01 WDS-SB18-GW WDS-SB19-GW)	1,2,3-TRICHLOROPROPANE 1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLORODIBROMOMETHANE	- 52.7 65.7	72.2 59.7 61.9	73.00-122.00 62.00-128.00 66.00-130.00 74.00-126.00	- - - -	1,2,3-TRICHLOROPROPANE 1,2-DIBROMO-3-CHLOROPROPA BROMOFORM CHLORODIBROMOMETHANE	J-(all detects) UJ(all non-detects)
VOA11B LCS 07051 (MP-MW01-01 MP-SB03-GW TB-GW-062216-01)	BROMOFORM CHLORODIBROMOMETHANE	58.6 67.7	- -	66.00-130.00 74.00-126.00	- -	BROMOFORM CHLORODIBROMOMETHANE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Trip Blank Outlier Report

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-062016-03(Initial/TOT)	6/20/2016 8:20:00 AM	ACETONE METHYLENE CHLORIDE	5.2 ug/L 0.63 ug/L	203-SB02-GW 203-SB03-GW 203-SB04-GW 203-SB05-GW WDS-SB18-GW WDS-SB19-GW
TB-GW-062116-01(Initial/TOT)	6/21/2016 8:00:00 AM	ACETONE METHYLENE CHLORIDE	1.5 ug/L 0.68 ug/L	H14-SB01-GW H14-SB03-GW H17-SB03-GW
TB-GW-062216-01(Initial/TOT)	6/22/2016 8:00:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	5.7 ug/L 0.86 ug/L 0.61 ug/L	EFO-SB01-GW MP-MW01-01 MP-SB03-GW MP-SB03-GW DUP

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
203-SB02-GW(Initial/TOT)	ACETONE	2.5 ug/L	10U ug/L
203-SB02-GW(Initial/TOT)	METHYLENE CHLORIDE	0.59 ug/L	5.0U ug/L
203-SB03-GW(Initial/TOT)	ACETONE	5.4 ug/L	10U ug/L
203-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.59 ug/L	5.0U ug/L
203-SB04-GW(Initial/TOT)	ACETONE	9.5 ug/L	10U ug/L
203-SB04-GW(Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
203-SB05-GW(Initial/TOT)	ACETONE	33 ug/L	33U ug/L
203-SB05-GW(Initial/TOT)	METHYLENE CHLORIDE	0.31 ug/L	5.0U ug/L
H17-SB03-GW(Initial/TOT)	ACETONE	1.5 ug/L	10U ug/L
H17-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.51 ug/L	5.0U ug/L
MP-MW01-01(Initial/TOT)	ACETONE	2.0 ug/L	10U ug/L
MP-MW01-01(Initial/TOT)	CHLOROMETHANE	0.78 ug/L	1.0U ug/L
MP-MW01-01(Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
MP-SB03-GW(Initial/TOT)	ACETONE	2.7 ug/L	10U ug/L
MP-SB03-GW(Initial/TOT)	CHLOROMETHANE	0.76 ug/L	1.0U ug/L
MP-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.48 ug/L	5.0U ug/L
WDS-SB18-GW(Initial/TOT)	ACETONE	7.3 ug/L	10U ug/L
WDS-SB18-GW(Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
WDS-SB19-GW(Initial/TOT)	ACETONE	8.9 ug/L	10U ug/L
WDS-SB19-GW(Initial/TOT)	METHYLENE CHLORIDE	0.41 ug/L	5.0U ug/L

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB02-GW	CADMIUM	J	0.90	1.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.89	2.0	LOQ	ug/L	
203-SB03-GW	BERYLLIUM	JG	0.42	1.0	LOQ	ug/L	J (all detects)
	CHROMIUM	J	8.1	10	LOQ	ug/L	
	COBALT	J	2.9	5.0	LOQ	ug/L	
	NICKEL	J	6.4	10	LOQ	ug/L	
	SELENIUM	JG	2.2	5.0	LOQ	ug/L	
	THALLIUM	JG	0.70	2.0	LOQ	ug/L	
203-SB04-GW	ZINC	J	20	50	LOQ	ug/L	J (all detects)
	CHROMIUM	J	1.8	10	LOQ	ug/L	
	COBALT	J	0.66	5.0	LOQ	ug/L	
	COPPER	JG	1.8	5.0	LOQ	ug/L	
	LEAD	J	0.52	1.0	LOQ	ug/L	
	NICKEL	J	2.2	10	LOQ	ug/L	
	SELENIUM	JG	3.4	5.0	LOQ	ug/L	
	VANADIUM	J	2.7	4.0	LOQ	ug/L	
203-SB05-GW	ZINC	J	6.2	50	LOQ	ug/L	J (all detects)
	BERYLLIUM	JG	0.35	1.0	LOQ	ug/L	
	CHROMIUM	J	6.9	10	LOQ	ug/L	
	COBALT	J	3.4	5.0	LOQ	ug/L	
	NICKEL	J	6.9	10	LOQ	ug/L	
H14-SB01-GW	ZINC	J	25	50	LOQ	ug/L	J (all detects)
	BERYLLIUM	JG	0.46	1.0	LOQ	ug/L	
	SELENIUM	JG	1.7	5.0	LOQ	ug/L	
	THALLIUM	JG	0.17	2.0	LOQ	ug/L	
H14-SB03-GW	ZINC	J	13	50	LOQ	ug/L	J (all detects)
	ARSENIC	J	0.73	1.5	LOQ	ug/L	
	COBALT	J	2.5	5.0	LOQ	ug/L	
	NICKEL	J	6.2	10	LOQ	ug/L	
H17-SB03-GW	ZINC	J	20	50	LOQ	ug/L	J (all detects)
	CADMIUM	J	0.57	1.0	LOQ	ug/L	
	THALLIUM	J	0.82	2.0	LOQ	ug/L	
MP-MW01-01	CHROMIUM	J	1.2	10	LOQ	ug/L	J (all detects)
	COBALT	J	1.0	5.0	LOQ	ug/L	
	NICKEL	J	1.9	10	LOQ	ug/L	
WDS-SB18-GW	CHROMIUM	J	4.2	10	LOQ	ug/L	J (all detects)
	COBALT	J	4.2	5.0	LOQ	ug/L	
	COPPER	JG	4.6	5.0	LOQ	ug/L	
	VANADIUM	J	3.6	4.0	LOQ	ug/L	
WDS-SB19-GW	CADMIUM	J	0.40	1.0	LOQ	ug/L	J (all detects)
	THALLIUM	JG	0.52	2.0	LOQ	ug/L	

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB02-GW	ANTIMONY	JG	1.1	2.5	LOQ	ug/L	J (all detects)
203-SB03-GW	ANTIMONY	JG	0.40	2.5	LOQ	ug/L	J (all detects)

Project Name and Number: - USACE Project: USACE Project: USACE Project: Camp Hero

Reporting Limit Outliers

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB04-GW	ANTIMONY	JG	0.25	2.5	LOQ	ug/L	J (all detects)
203-SB05-GW	ANTIMONY	JG	0.24	2.5	LOQ	ug/L	J (all detects)
H17-SB03-GW	ANTIMONY	JG	2.1	2.5	LOQ	ug/L	J (all detects)
MP-MW01-01	ANTIMONY	JG	1.0	2.5	LOQ	ug/L	J (all detects)
WDS-SB18-GW	ANTIMONY	JG	0.35	2.5	LOQ	ug/L	J (all detects)
WDS-SB19-GW	ANTIMONY	JG	0.48	2.5	LOQ	ug/L	J (all detects)

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
203-SB02-GW	ACETONE	J	2.5	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.59	5.0	LOQ	ug/L	
203-SB03-GW	ACETONE	J	5.4	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.59	5.0	LOQ	ug/L	
203-SB04-GW	2-Butanone [MEK]	J	3.8	10	LOQ	ug/L	J (all detects)
	ACETONE	J	9.5	10	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.47	5.0	LOQ	ug/L	
203-SB05-GW	METHYLENE CHLORIDE	J	0.31	5.0	LOQ	ug/L	J (all detects)
H17-SB03-GW	ACETONE	J	1.5	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.51	5.0	LOQ	ug/L	
MP-MW01-01	ACETONE	J	2.0	10	LOQ	ug/L	J (all detects)
	CARBON DISULFIDE	J	0.75	1.0	LOQ	ug/L	
	CHLOROMETHANE	JB	0.78	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.47	5.0	LOQ	ug/L	
MP-SB03-GW	ACETONE	J	2.7	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JB	0.76	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.48	5.0	LOQ	ug/L	
TB-GW-062016-03	ACETONE	J	5.2	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.63	5.0	LOQ	ug/L	
TB-GW-062116-01	ACETONE	J	1.5	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.68	5.0	LOQ	ug/L	
TB-GW-062216-01	ACETONE	J	5.7	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JB	0.86	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.61	5.0	LOQ	ug/L	
WDS-SB18-GW	ACETONE	J	7.3	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.47	5.0	LOQ	ug/L	
WDS-SB19-GW	2-Butanone [MEK]	J	6.6	10	LOQ	ug/L	J (all detects)
	ACETONE	J	8.9	10	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.41	5.0	LOQ	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606833

Laboratory: RTILABS

EDD Filename: EDD_1606833_SEDD_2a_v8_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD

Matrix: Water

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
203-SB03-GW	BENZOIC ACID	JYQ	5.3	24	LOQ	ug/L	J (all detects)
203-SB04-GW	DIETHYL PHTHALATE	J	0.86	5.7	LOQ	ug/L	J (all detects)
H17-SB03-GW	DIETHYL PHTHALATE	J	1.3	5.5	LOQ	ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606859		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	1 wipe and 1 concrete sample for a project-specific list of PCBs		
Data Reviewer:	Devon Chicoine AECOM/Arlington, VA		
Completed:	August 29, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606859. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✗ Surrogate recoveries
- ✓ Laboratory duplicate results
- NA Field duplicate results
- ✓ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606859

Laboratory: RTILABS

EDD Filename: EDD_1606859_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8082A-WIPE	Matrix: Wipe

Sample ID: B113-WP01-01 Collected: 6/21/2016 3:00:00 PM Analysis Type: Dilution-1 Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0012	UQ	0.0012	LOD	0.0012	LOQ	mg	UJ	Lcs, Lcs
AROCLOR 1254	4.4	P	0.0012	LOD	0.0012	LOQ	mg	J+	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606859

Laboratory: RTILABS

EDD Filename: EDD_1606859_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606859

EDD Filename: EDD_1606859_SEDD_2a_v5_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Surrogate Outlier Report

Lab Reporting Batch ID: 1606859

Laboratory: RTILABS

EDD Filename: EDD_1606859_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A-WIPE

Matrix: Wipe

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
B113-WP01-01 (Dilution-1)	DECACHLOROBIPHENYL	131	60.00-125.00	All Target Analytes	J+ (all detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606859

Laboratory: RTILABS

EDD Filename: EDD_1606859_SEDD_2a_v5_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A-WIPE

Matrix: Wipe

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCS-40498 LCSD-40498 (B113-WP01-01)	AROCLOR 1016	62.8	-	70.00-130.00	58.16 (30.00)	AROCLOR 1016	J (all detects) UJ (all non-detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606937		
Date(s) of Collection:	June 19 th , 2016		
Number/Type Samples & Analyses:	1 wipe and 1 concrete sample for a project-specific list of PCBs		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 29 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606937. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- NA Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606937

Laboratory: RTILABS

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8082A	Matrix:	Soil						

Sample ID: 107-CC01-01		Collected: AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
AROCLOR 1221	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
AROCLOR 1232	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
AROCLOR 1242	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
AROCLOR 1248	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
AROCLOR 1254	0.0092	JP	0.0065	LOD	0.032	LOQ	mg/Kg	J	RI, TempEst, Surr
Aroclor 1262	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
Aroclor 1268	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr
AROCLOR 1260	0.0065	U	0.0065	LOD	0.032	LOQ	mg/Kg	UJ	TempEst, Surr

Method Category:	SVOA								
Method:	8082A-WIPE	Matrix:	Wipe						

Sample ID: 107-WP01-01		Collected: AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.00025	UQ	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst, Lcs, Lcs
AROCLOR 1221	0.00025	U	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst
AROCLOR 1232	0.00025	U	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst
AROCLOR 1242	0.00025	U	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst
AROCLOR 1248	0.00025	U	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst
AROCLOR 1254	0.00025	U	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst
AROCLOR 1260	0.00025	U	0.00025	LOD	0.00025	LOQ	mg	UJ	TempEst

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606937

Laboratory: RTILABS

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
TempEst	Temperature Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606937

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	SR
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Temperature Outliers

Lab Reporting Batch ID: 1606937

Laboratory: RTILABS

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

SampleID	Analyte	Temperature	Criteria	Flag
107-CC01-01	All TCLs	22.6 °C	12.00 °C	J- (all detects) UJ (all non-detects)

Method: 8082A-WIPE
Matrix: Wipe

SampleID	Analyte	Temperature	Criteria	Flag
107-WP01-01	All TCLs	22.6 °C	12.00 °C	J- (all detects) UJ (all non-detects)

Surrogate Outlier Report

Lab Reporting Batch ID: 1606937

Laboratory: RTILABS

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
107-CC01-01 (Initial)	DECACHLOROBIPHENYL	47.7	60.00-125.00	All Target Analytes	J- (all detects) UJ (all non-detects)
	TETRACHLORO-M-XYLENE	36.2	44.00-130.00		

Method: 8082A-WIPE
Matrix: Wipe

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
107-WP01-01 (Initial)	DECACHLOROBIPHENYL	128	60.00-125.00	All Target Analytes	J+(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606937

Laboratory: RTILABS

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A-WIPE

Matrix: Wipe

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCS-40498 LCSD-40498 (107-WP01-01)	AROCLOR 1016	62.8	-	70.00-130.00	58.16 (30.00)	AROCLOR 1016	J (all detects) UJ (all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606937

Laboratory: RTILABS

EDD Filename: EDD_1606937_SEDD_2a_v9_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A

Matrix: Soil

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
107-CC01-01	AROCLOR 1254	JP	0.0092	0.032	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606286		
Date(s) of Collection:	June 7 th , 2016		
Number/Type Samples & Analyses:	12 soil samples for project-specific list of Polynuclear Hydrocarbons, PCBs, and Metals		
Senior Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 26 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606286. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR, Data quality requirements can be found in the Final 2016

Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✓ Laboratory control sample (LCS) recoveries
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR. ADR Discrepancy reports are included in Attachment B.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID: H11-SB01-04 **Collected:** 6/7/2016 1:40:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.17	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.033	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	2.7	J	0.77	LOD	3.9	LOQ	mg/Kg	J	RI

Sample ID: H11-SB02-04 **Collected:** 6/7/2016 1:00:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.19	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI

Sample ID: H11-SB02-06 **Collected:** 6/7/2016 1:10:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.090	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: H11-SS01-01 **Collected:** 6/7/2016 1:30:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.39	J	0.39	LOD	0.77	LOQ	mg/Kg	J	RI
BERYLLIUM	0.075	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.049	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
COBALT	0.46	J	0.19	LOD	0.77	LOQ	mg/Kg	J	RI
LEAD	3.8	J	0.77	LOD	3.9	LOQ	mg/Kg	J	RI
NICKEL	3.0	J	0.77	LOD	3.9	LOQ	mg/Kg	J	RI

Sample ID: H11-SS02-01 **Collected:** 6/7/2016 12:50:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.031	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB22-05 **Collected:** 6/7/2016 3:35:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.046	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C	Matrix:		Soil						

Sample ID: WDS-SB22-05 **Collected:** 6/7/2016 3:35:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	2.6	J	0.75	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB23-05 **Collected:** 6/7/2016 2:30:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.18	J	0.20	LOD	0.80	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB24-04 **Collected:** 6/7/2016 2:10:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.17	J	0.041	LOD	0.21	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB25-08 **Collected:** 6/7/2016 3:50:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.048	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB27-08 **Collected:** 6/7/2016 3:05:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.4	J	0.83	LOD	1.7	LOQ	mg/Kg	J	RI
CADMIUM	0.035	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB27-08 DUP **Collected:** 6/7/2016 3:05:00 PM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.4	J	0.82	LOD	1.6	LOQ	mg/Kg	J	RI
CADMIUM	0.045	J	0.041	LOD	0.20	LOQ	mg/Kg	J	RI
LEAD	3.9	J	0.82	LOD	4.1	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: H11-SB01-04 **Collected:** 6/7/2016 1:40:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.063	JG	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: H11-SB02-04 **Collected:** 6/7/2016 1:00:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.076	JG	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: H11-SB02-06 **Collected:** 6/7/2016 1:10:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.074	JG	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: H11-SS01-01 **Collected:** 6/7/2016 1:30:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.062	JG	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: H11-SS02-01 **Collected:** 6/7/2016 12:50:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.073	JG	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB22-05 **Collected:** 6/7/2016 3:35:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.081	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB23-05 **Collected:** 6/7/2016 2:30:00 PM **Analysis Type:** Initial **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.14	JG	0.040	LOD	0.16	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID:WDS-SB25-08 Collected: 6/7/2016 3:50:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.11	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID:WDS-SB26-05 Collected: 6/7/2016 4:20:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.15	JG	0.041	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID:WDS-SB27-08 Collected: 6/7/2016 3:05:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.13	JG	0.041	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID:WDS-SB27-08 DUP Collected: 6/7/2016 3:05:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.082	JG	0.042	LOD	0.17	LOQ	mg/Kg	J	RI

Method Category:	SVOA								
Method:	8082A	Matrix:	Soil						

Sample ID:WDS-SB27-08 Collected: 6/7/2016 3:05:00 PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.0084	U	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID: WDS-SB27-08	Collected: 6/7/2016 3:05:00 PM	Analysis Type: NEUTRAL	Initial-BASE/	Dilution: 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.00084	UY	0.00084	LOD	0.00084	LOQ	mg/Kg	UJ	Fd
FLUORANTHENE	0.00084	U	0.00084	LOD	0.00084	LOQ	mg/Kg	UJ	Fd
PYRENE	0.00084	U	0.00084	LOD	0.00084	LOQ	mg/Kg	UJ	Fd

Sample ID: WDS-SB27-08 DUP	Collected: 6/7/2016 3:05:00 PM	Analysis Type: NEUTRAL	Initial-BASE/	Dilution: 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.0015	Y	0.00085	LOD	0.00085	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.0012		0.00085	LOD	0.00085	LOQ	mg/Kg	J	Fd
PYRENE	0.0012		0.00085	LOD	0.00085	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Mb	Method Blank Contamination
Rl	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606286

EDD Filename: EDD_1606286_SEDD_2a_v11

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40137	6/22/2016 1:53:06 PM	CHROMIUM	0.25 mg/Kg	H11-SB01-04 H11-SB02-04 H11-SB02-06 H11-SS01-01 H11-SS02-01 WDS-SB22-05 WDS-SB23-05 WDS-SB24-04 WDS-SB25-08 WDS-SB27-08 WDS-SB27-08 DUP
MB-40157	7/13/2016 12:22:56 PM	MANGANESE	0.19 mg/Kg	WDS-SB26-05

Surrogate Outlier Report

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB27-08 (Initial)	DECACHLOROBIPHENYL	55.5	60.00-125.00	All Target Analytes	J- (all detects) UJ (all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	WDS-SB27-08	WDS-SB27-08 DUP			
BENZO(B)FLUORANTHENE	0.00084 UY	0.0015	200	50.00	J (all detects) UJ (all non-detects)
FLUORANTHENE	0.00084 U	0.0012	200	50.00	
PYRENE	0.00084 U	0.0012	200	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606286

Laboratory: RTILABS

EDD Filename: EDD_1606286_SEDD_2a_v11

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H11-SB01-04	BERYLLIUM	J	0.17	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.033	0.19	LOQ	mg/Kg	
	LEAD	J	2.7	3.9	LOQ	mg/Kg	
H11-SB02-04	CADMIUM	J	0.19	0.20	LOQ	mg/Kg	J (all detects)
H11-SB02-06	CADMIUM	J	0.090	0.19	LOQ	mg/Kg	J (all detects)
H11-SS01-01	ANTIMONY	J	0.39	0.77	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.075	0.19	LOQ	mg/Kg	
	CADMIUM	J	0.049	0.19	LOQ	mg/Kg	
	COBALT	J	0.46	0.77	LOQ	mg/Kg	
	LEAD	J	3.8	3.9	LOQ	mg/Kg	
	NICKEL	J	3.0	3.9	LOQ	mg/Kg	
H11-SS02-01	CADMIUM	J	0.031	0.19	LOQ	mg/Kg	J (all detects)
WDS-SB22-05	CADMIUM	J	0.046	0.19	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.6	3.7	LOQ	mg/Kg	
WDS-SB23-05	SILVER	J	0.18	0.80	LOQ	mg/Kg	J (all detects)
WDS-SB24-04	CADMIUM	J	0.17	0.21	LOQ	mg/Kg	J (all detects)
WDS-SB25-08	CADMIUM	J	0.048	0.19	LOQ	mg/Kg	J (all detects)
WDS-SB27-08	ARSENIC	J	1.4	1.7	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.035	0.21	LOQ	mg/Kg	
WDS-SB27-08 DUP	ARSENIC	J	1.4	1.6	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.045	0.20	LOQ	mg/Kg	
	LEAD	J	3.9	4.1	LOQ	mg/Kg	

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H11-SB01-04	THALLIUM	JG	0.063	0.16	LOQ	mg/Kg	J (all detects)
H11-SB02-04	THALLIUM	JG	0.076	0.15	LOQ	mg/Kg	J (all detects)
H11-SB02-06	THALLIUM	JG	0.074	0.16	LOQ	mg/Kg	J (all detects)
H11-SS01-01	THALLIUM	JG	0.062	0.16	LOQ	mg/Kg	J (all detects)
H11-SS02-01	THALLIUM	JG	0.073	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB22-05	THALLIUM	JG	0.081	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB23-05	THALLIUM	JG	0.14	0.16	LOQ	mg/Kg	J (all detects)
WDS-SB25-08	THALLIUM	JG	0.11	0.15	LOQ	mg/Kg	J (all detects)
WDS-SB26-05	THALLIUM	JG	0.15	0.16	LOQ	mg/Kg	J (all detects)
WDS-SB27-08	THALLIUM	JG	0.13	0.16	LOQ	mg/Kg	J (all detects)
WDS-SB27-08 DUP	THALLIUM	JG	0.082	0.17	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606293		
Date(s) of Collection:	June 7 th , 2016		
Number/Type Samples & Analyses:	21 soil samples for a project-specific list of VOCs, SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 29 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606293. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or during manual data review of ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: H12-SB01-05		Collected: 6/7/2016 1:00:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.051	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
BERYLLIUM	0.11	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: H12-SS01-01		Collected: 6/7/2016 12:50:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.037	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.025	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
NICKEL	3.3	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: H20-SS01-01		Collected: 6/7/2016 10:15:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.2	J	1.0	LOD	2.0	LOQ	mg/Kg	J	RI
SILVER	0.28	J	0.25	LOD	1.0	LOQ	mg/Kg	J	RI

Sample ID: H20-SS01-02		Collected: 6/7/2016 10:20:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.036	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	3.0	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: H20-SS02-01		Collected: 6/7/2016 10:25:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.3	J	0.82	LOD	1.6	LOQ	mg/Kg	J	RI
CADMIUM	0.14	J	0.041	LOD	0.21	LOQ	mg/Kg	J	RI
LEAD	2.9	J	0.82	LOD	4.1	LOQ	mg/Kg	J	RI

Sample ID: H20-SS02-02		Collected: 6/7/2016 10:50:00 AM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2400		37	LOD	370	LOQ	mg/Kg	J+	Ms

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C			Matrix: Soil						

Sample ID: H20-SS02-02		Collected: 6/7/2016 10:50:00 AM			Analysis Type: Dilution-2			Dilution: 100		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ALUMINUM	8100		150	LOD	370	LOQ	mg/Kg	J+	Ms	
IRON	26000		370	LOD	1100	LOQ	mg/Kg	J-	Ms	

Sample ID: H20-SS02-02		Collected: 6/7/2016 10:50:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BARIUM	40	X	3.7	LOD	7.5	LOQ	mg/Kg	J+	Ms	
CALCIUM	1000	X	7.5	LOD	37	LOQ	mg/Kg	J+	Ms	
COPPER	67	X	0.75	LOD	3.7	LOQ	mg/Kg	J+	Ms	
LEAD	3.0	J	0.75	LOD	3.7	LOQ	mg/Kg	J	RI	
NICKEL	16	X	0.75	LOD	3.7	LOQ	mg/Kg	J+	Ms	
POTASSIUM	1600	X	7.5	LOD	15	LOQ	mg/Kg	J+	Ms	
SELENIUM	1.1	UX	1.1	LOD	1.5	LOQ	mg/Kg	UJ	Ms, Ms	
VANADIUM	18	X	0.75	LOD	1.9	LOQ	mg/Kg	J+	Ms	

Sample ID: H20-SS02-02		Collected: 6/7/2016 10:50:00 AM			Analysis Type: Reanalysis-1			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
CHROMIUM	21	GX	0.30	LOD	0.37	LOQ	mg/Kg	J+	Ms	
MANGANESE	180	X	0.19	LOD	0.75	LOQ	mg/Kg	J	Ms, Ms	

Sample ID: H3-SS01-01		Collected: 6/7/2016 9:10:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
CADMIUM	0.045	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI	
NICKEL	2.8	J	0.79	LOD	3.9	LOQ	mg/Kg	J	RI	

Sample ID: H3-SS01-02		Collected: 6/7/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BERYLLIUM	0.10	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI	
CADMIUM	0.030	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI	

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C	Matrix:		Soil						

Sample ID: H3-SS02-01		Collected: 6/7/2016 9:20:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
SILVER	0.53	J	0.19	LOD	0.77	LOQ	mg/Kg	J	RI	

Sample ID: H3-SS02-02		Collected: 6/7/2016 9:25:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BERYLLIUM	0.078	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI	

Sample ID: H9-SS01-01		Collected: 6/6/2016 2:15:00 PM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
CADMIUM	0.043	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI	

Sample ID: WDS-SB21-05		Collected: 6/7/2016 4:50:00 PM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
CADMIUM	0.027	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI	
LEAD	1.6	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI	

Method Category:	METALS									
Method:	6020A-TL	Matrix:		Soil						

Sample ID: H12-SB01-05		Collected: 6/7/2016 1:00:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.075	JG	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H12-SS01-01		Collected: 6/7/2016 12:50:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.067	JG	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL			Matrix: Soil						

Sample ID: H20-SS01-01		Collected: 6/7/2016 10:15:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.068	JG	0.048	LOD	0.19	LOQ	mg/Kg	J	RI	

Sample ID: H20-SS01-02		Collected: 6/7/2016 10:20:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.14	JG	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H20-SS02-01		Collected: 6/7/2016 10:25:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.079	JG	0.040	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: H20-SS02-02		Collected: 6/7/2016 10:50:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.14	JG	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H3-SS01-01		Collected: 6/7/2016 9:10:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.054	JG	0.040	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: H3-SS01-02		Collected: 6/7/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.066	JG	0.040	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: H3-SS02-01		Collected: 6/7/2016 9:20:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.074	JG	0.041	LOD	0.16	LOQ	mg/Kg	J	RI	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID:H3-SS02-02 Collected: 6/7/2016 9:25:00 AM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.094	JG	0.041	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID:H9-SS01-01 Collected: 6/6/2016 2:15:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.060	JG	0.043	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID:WDS-SB21-05 Collected: 6/7/2016 4:50:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.052	JG	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Method Category:	SVOA								
Method:	8082A	Matrix:	Soil						

Sample ID:H20-SS02-02 Collected: 6/7/2016 10:50:00 AM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.0078	U	0.0078	LOD	0.039	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID: H12-SB01-05		Collected: 6/7/2016 1:00:00 PM		Analysis Type: NEUTRAL		Initial-BASE/		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	0.017		0.00074	LOD	0.00074	LOQ	mg/Kg	J+	Lcs

Sample ID: H12-SS01-01		Collected: 6/7/2016 12:50:00 PM		Analysis Type: NEUTRAL		Dilution-1-BASE/		Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	0.074		0.0073	LOD	0.0073	LOQ	mg/Kg	J+	Lcs

Sample ID: H12-SS01-01		Collected: 6/7/2016 12:50:00 PM		Analysis Type: NEUTRAL		Initial-BASE/		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.030		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr
ACENAPHTHENE	0.0080		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr
ACENAPHTHYLENE	0.0055		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr
ANTHRACENE	0.018		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr
DIBENZO(A,H)ANTHRACENE	0.0095		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr
FLUORENE	0.0074		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr
NAPHTHALENE	0.026		0.00073	LOD	0.00073	LOQ	mg/Kg	J+	Surr

Sample ID: H20-SS02-02		Collected: 6/7/2016 10:50:00 AM		Analysis Type: NEUTRAL		Initial-BASE/		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.017	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Ms
BENZO(K)FLUORANTHENE	0.0078	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Ms
CHRYSENE	0.019	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms
FLUORANTHENE	0.032	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms, Ms
PHENANTHRENE	0.0077	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Ms
PYRENE	0.027	X	0.00078	LOD	0.00078	LOQ	mg/Kg	J	Ms, Ms

Sample ID: H3-SS02-02		Collected: 6/7/2016 9:25:00 AM		Analysis Type: NEUTRAL		Initial-BASE/		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	0.0024		0.00084	LOD	0.00084	LOQ	mg/Kg	J+	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Soil

Sample ID:H20-SS01-01		6/7/2016 10:15:00		Collected: AM				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4-DINITROPHENOL	0.25	UYQ	0.25	LOD	1.2	LOQ	mg/Kg	UJ	Lcs		
BENZOIC ACID	0.50	UQZ	0.50	LOD	1.5	LOQ	mg/Kg	UJ	Lcs		

Sample ID:H20-SS01-01		6/7/2016 10:15:00		Collected: AM				Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
CARBAZOLE	0.15	J	0.025	LOD	0.24	LOQ	mg/Kg	J	RI		
DIBENZOFURAN	0.16	J	0.025	LOD	0.24	LOQ	mg/Kg	J	RI		

Sample ID:H20-SS01-02		6/7/2016 10:20:00		Collected: AM				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4-DINITROPHENOL	0.19	UYQ	0.19	LOD	0.94	LOQ	mg/Kg	UJ	Lcs		
BENZOIC ACID	0.38	UQZ	0.38	LOD	1.1	LOQ	mg/Kg	UJ	Lcs		

Sample ID:H20-SS01-02		6/7/2016 10:20:00		Collected: AM				Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
DIBENZOFURAN	0.012	J	0.019	LOD	0.18	LOQ	mg/Kg	J	RI		

Sample ID:H20-SS02-02		6/7/2016 10:50:00		Collected: AM				Analysis Type: Initial-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4-DINITROPHENOL	0.19	UYQ	0.19	LOD	0.96	LOQ	mg/Kg	UJ	Lcs		
BENZOIC ACID	0.39	UQXZ	0.39	LOD	1.2	LOQ	mg/Kg	UJ	Lcs		

Sample ID:H20-SS02-02		6/7/2016 10:50:00		Collected: AM				Analysis Type: Initial-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
3,3'-DICHLOROBENZIDINE	0.77	UX	0.77	LOD	1.2	LOQ	mg/Kg	UJ	Ms		

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Soil

Sample ID: H3-SS01-01		Collected: 6/7/2016 9:10:00 AM		Analysis Type: Initial-ACID		Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.20	UYQ	0.20	LOD	1.0	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.65	JQZ	0.40	LOD	1.2	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H3-SS01-02		Collected: 6/7/2016 9:15:00 AM		Analysis Type: Initial-ACID		Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.20	UYQ	0.20	LOD	1.0	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.27	JQZ	0.40	LOD	1.2	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H3-SS02-01		Collected: 6/7/2016 9:20:00 AM		Analysis Type: Initial-ACID		Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.20	UYQ	0.20	LOD	1.0	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.38	JQZ	0.40	LOD	1.2	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H3-SS02-02		Collected: 6/7/2016 9:25:00 AM		Analysis Type: Initial-ACID		Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	0.21	UYQ	0.21	LOD	1.0	LOQ	mg/Kg	UJ	Lcs
BENZOIC ACID	0.31	JQZ	0.41	LOD	1.2	LOQ	mg/Kg	J	RI, Lcs

Sample ID: H3-SS02-02		Collected: 6/7/2016 9:25:00 AM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
bis(2-chloroethoxy) methane	0.034	J	0.021	LOD	0.20	LOQ	mg/Kg	J	RI

Method Category:	VOA	
Method:	8260C	Matrix: Soil

Sample ID: H12-SB01-05		Collected: 6/7/2016 1:00:00 PM		Analysis Type: Initial		Dilution: 0.81			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.0078	J	0.0091	LOD	0.018	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Soil

Sample ID:H12-SB01-05 Collected: 6/7/2016 1:00:00 PM Analysis Type: Initial Dilution: 0.81

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.074	YQ	0.0018	LOD	0.0091	LOQ	mg/Kg	UJ	Lcs, Tb
BROMOFORM	0.00055	UQ	0.00055	LOD	0.00091	LOQ	mg/Kg	UJ	Lcs

Sample ID:H12-SS01-01 Collected: 6/7/2016 12:50:00 PM Analysis Type: Initial Dilution: 0.76

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.011	J	0.0085	LOD	0.017	LOQ	mg/Kg	J	RI
ACETONE	0.15	YQ	0.0017	LOD	0.0085	LOQ	mg/Kg	J+	Lcs
BROMOFORM	0.00051	UQ	0.00051	LOD	0.00085	LOQ	mg/Kg	UJ	Lcs

Sample ID:H20-SS01-02 Collected: 6/7/2016 10:20:00 AM Analysis Type: Initial Dilution: 3.65

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.060	YQ	0.0084	LOD	0.042	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.0025	UQ	0.0025	LOD	0.0042	LOQ	mg/Kg	UJ	Lcs

Sample ID:H20-SS02-02 Collected: 6/7/2016 10:50:00 AM Analysis Type: Initial Dilution: 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.0069	J	0.011	LOD	0.022	LOQ	mg/Kg	J	RI
ACETONE	0.15	YQ	0.0022	LOD	0.011	LOQ	mg/Kg	J+	Lcs
BROMOFORM	0.00065	UQ	0.00065	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs

Sample ID:H3-SS01-02 Collected: 6/7/2016 9:15:00 AM Analysis Type: Initial Dilution: 1.34

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.22	YQ	0.0032	LOD	0.016	LOQ	mg/Kg	J+	Lcs
BROMOFORM	0.00097	UQ	0.00097	LOD	0.0016	LOQ	mg/Kg	UJ	Lcs

Sample ID:H3-SS02-02 Collected: 6/7/2016 9:25:00 AM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.13	YQ	0.0025	LOD	0.013	LOQ	mg/Kg	J+	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Soil

Sample ID: H3-SS02-02 **Collected:** 6/7/2016 9:25:00 AM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.00075	UQ	0.00075	LOD	0.0013	LOQ	mg/Kg	UJ	Lcs

Sample ID: TB-SO-060716-01 **Collected:** 6/7/2016 8:50:00 AM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.0090	JYQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Mb
BROMOFORM	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0017	JB	0.0020	LOD	0.0050	LOQ	mg/Kg	U	Mb

Sample ID: TB-SO-060716-02 **Collected:** 6/7/2016 9:00:00 AM **Analysis Type:** Initial **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.011	YQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Mb
BROMOFORM	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0062	B	0.0020	LOD	0.0050	LOQ	mg/Kg	U	Mb

Sample ID: WDS-SB24-04 **Collected:** 6/7/2016 2:10:00 PM **Analysis Type:** Initial **Dilution:** 0.59

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.0092	J	0.0073	LOD	0.015	LOQ	mg/Kg	J	RI
ACETONE	0.072	YQ	0.0015	LOD	0.0073	LOQ	mg/Kg	UJ	Lcs, Tb
BROMOFORM	0.00044	UQ	0.00044	LOD	0.00073	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB25-08 **Collected:** 6/7/2016 3:50:00 PM **Analysis Type:** Initial **Dilution:** 0.82

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.15	YQ	0.0019	LOD	0.0095	LOQ	mg/Kg	J+	Lcs
BROMOFORM	0.00057	UQ	0.00057	LOD	0.00095	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB26-05 **Collected:** 6/7/2016 4:20:00 PM **Analysis Type:** Initial **Dilution:** 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.068	YQ	0.0019	LOD	0.0097	LOQ	mg/Kg	UJ	Lcs, Tb

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA								
Method:	8260C	Matrix:	Soil						

Sample ID: WDS-SB26-05 Collected: 6/7/2016 4:20:00 PM Analysis Type: Initial Dilution: 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.00058	UQ	0.00058	LOD	0.00097	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB27-08 DUP Collected: 6/7/2016 3:05:00 PM Analysis Type: Initial Dilution: 0.4

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.032	YQ	0.00098	LOD	0.0049	LOQ	mg/Kg	UJ	Lcs, Tb
CARBON DISULFIDE	0.00030	J	0.00029	LOD	0.00049	LOQ	mg/Kg	J	RI

Method Category:	VOA								
Method:	8260C-ME	Matrix:	Soil						

Sample ID: H20-SS01-01 Collected: 6/7/2016 10:15:00 AM Analysis Type: Initial Dilution: 91.5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.083	UQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.24	J	0.28	LOD	0.69	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.083	UQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
BROMOFORM	0.083	UYQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.083	UQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.083	UQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
STYRENE	0.083	UQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.083	UQ	0.083	LOD	0.14	LOQ	mg/Kg	UJ	Lcs

Sample ID: H20-SS02-01 Collected: 6/7/2016 10:25:00 AM Analysis Type: Initial Dilution: 203.1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.15	UQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.49	J	0.51	LOD	1.3	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.15	UQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs
BROMOFORM	0.15	UYQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.15	UQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.15	UQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA									
Method:	8260C-ME			Matrix: Soil						

Sample ID: H20-SS02-01	Collected: 6/7/2016 10:25:00 AM			Analysis Type: Initial				Dilution: 203.1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
STYRENE	0.15	UQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs	
TRANS-1,3-DICHLOROPROPENE	0.15	UQ	0.15	LOD	0.25	LOQ	mg/Kg	UJ	Lcs	

Sample ID: H3-SS01-01	Collected: 6/7/2016 9:10:00 AM			Analysis Type: Initial				Dilution: 115.4		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,1,1,2-TETRACHLOROETHANE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	
ACETONE	0.19	J	0.28	LOD	0.70	LOQ	mg/Kg	J	RI	
BROMODICHLOROMETHANE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	
BROMOFORM	0.084	UYQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	
CHLORODIBROMOMETHANE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	
CIS-1,3-DICHLOROPROPENE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	
STYRENE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	
TRANS-1,3-DICHLOROPROPENE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs	

Sample ID: H3-SS02-01	Collected: 6/7/2016 9:20:00 AM			Analysis Type: Initial				Dilution: 107.2		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,1,1,2-TETRACHLOROETHANE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	
BROMODICHLOROMETHANE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	
BROMOFORM	0.079	UYQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	
CHLORODIBROMOMETHANE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	
CIS-1,3-DICHLOROPROPENE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	
METHYLENE CHLORIDE	0.13	J	0.13	LOD	0.26	LOQ	mg/Kg	J	RI	
STYRENE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	
TRANS-1,3-DICHLOROPROPENE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs	

Sample ID: WDS-SB21-05	Collected: 6/7/2016 4:50:00 PM			Analysis Type: Initial				Dilution: 76.2		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,1,1,2-TETRACHLOROETHANE	0.050	UQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs	
BROMODICHLOROMETHANE	0.050	UQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs	

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C-ME	Matrix: Soil

Sample ID: WDS-SB21-05 **Collected:** 6/7/2016 4:50:00 PM **Analysis Type:** Initial **Dilution:** 76.2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.050	UYQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.050	UQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.050	UQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs
STYRENE	0.050	UQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.050	UQ	0.050	LOD	0.083	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB22-05 **Collected:** 6/7/2016 3:35:00 PM **Analysis Type:** Initial **Dilution:** 90

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.062	UQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.21	J	0.21	LOD	0.51	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.062	UQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
BROMOFORM	0.062	UYQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.062	UQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.062	UQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
STYRENE	0.062	UQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.062	UQ	0.062	LOD	0.10	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB23-05 **Collected:** 6/7/2016 2:30:00 PM **Analysis Type:** Initial **Dilution:** 133.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.80	J	1.1	LOD	2.2	LOQ	mg/Kg	J	RI
BROMOFORM	0.13	UQ	0.13	LOD	0.22	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB27-08 **Collected:** 6/7/2016 3:05:00 PM **Analysis Type:** Initial **Dilution:** 268.1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.20	UQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.20	UQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs
BROMOFORM	0.20	UYQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.20	UQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.20	UQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category: VOA	
Method: 8260C-ME	Matrix: Soil

Sample ID: WDS-SB27-08

Collected: 6/7/2016 3:05:00 PM Analysis Type: Initial

Dilution: 268.1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STYRENE	0.20	UQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.20	UQ	0.20	LOD	0.34	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606293

EDD Filename: EDD_1606293_SEDD_2a_v14

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Surrogate Outlier Report

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H20-SS02-02 (Initial)	DECACHLOROBIPHENYL	59.1	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H12-SS01-01 (Initial)	Terphenyl-d14	157	58.00-133.00	All Base/Neutral Target Analytes	J+ (all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H20-SS02-02MSD (H20-SS02-02)	BENZOIC ACID	-	123	40.00-117.00	65.99 (25.00)	BENZOIC ACID	J (all detects)
H20-SS02-02MS H20-SS02-02MSD (H20-SS02-02)	3,3'-DICHLOROBENZIDINE	0	0	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J-(all detects) UJ(all non-detects)

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H20-SS02-02MS (Dry) H20-SS02-02MSD (Dry) (H20-SS02-02)	MANGANESE SELENIUM	48.2 23.8	156 31.1	84.00-114.00 78.00-111.00	- 25.37 (20.00)	MANGANESE SELENIUM	J(all detects) UJ(all non-detects)
H20-SS02-02MS (Dry) H20-SS02-02MSD (Dry) (H20-SS02-02)	IRON	-253	60.2	81.00-118.00	-	IRON	J-(all detects) UJ(all non-detects)
H20-SS02-02MS (Dry) H20-SS02-02MSD (Dry) (H20-SS02-02)	ALUMINUM BARIUM CALCIUM CHROMIUM COPPER MAGNESIUM NICKEL POTASSIUM VANADIUM	4750 - 193 130 152 161 153 269 119	9910 145 210 114 128 331 129 283 118	74.00-119.00 83.00-113.00 81.00-116.00 85.00-113.00 81.00-117.00 78.00-115.00 83.00-113.00 81.00-116.00 82.00-114.00	- - - - - - - - -	ALUMINUM BARIUM CALCIUM CHROMIUM COPPER MAGNESIUM NICKEL POTASSIUM VANADIUM	J+(all detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H20-SS02-02MS H20-SS02-02MSD (H20-SS02-02)	CHRYSENE FLUORANTHENE PYRENE	- 122 -	8.61 35 19.8	57.00-118.00 55.00-119.00 55.00-117.00	37.55 (25.00) 30.18 (25.00) 30.59 (25.00)	CHRYSENE FLUORANTHENE PYRENE	J(all detects) UJ(all non-detects)
H20-SS02-02MSD (H20-SS02-02)	BENZ(A)ANTHRACENE BENZO(K)FLUORANTHENE	- -	39.6 38	54.00-122.00 56.00-123.00	- -	BENZ(A)ANTHRACENE BENZO(K)FLUORANTHENE	J-(all detects) UJ(all non-detects)
H20-SS02-02MSD (H20-SS02-02)	PHENANTHRENE	-	123	49.00-113.00	-	PHENANTHRENE	J+(all detects)

Project Name and Number: - USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40135 (H20-SS01-01 H20-SS01-02 H20-SS02-02 H3-SS01-01 H3-SS01-02 H3-SS02-01 H3-SS02-02)	2,4-DINITROPHENOL BENZOIC ACID	46.4 14.1	- -	50.00-130.00 40.00-117.00	- -	2,4-DINITROPHENOL BENZOIC ACID	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40172 (H12-SB01-05 H12-SS01-01 H3-SS02-02 WDS-SB21-05)	BENZO(G,H,I)PERYLENE	130	-	49.00-127.00	-	BENZO(G,H,I)PERYLENE	J+(all detects)

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCSD 0614 (H12-SB01-05 H12-SS01-01 H20-SS01-02 H20-SS02-02 H3-SS01-02 H3-SS02-02 TB-SO-060716-01 TB-SO-060716-02 WDS-SB24-04 WDS-SB25-08 WDS-SB26-05)	BROMOFORM	-	66.1	67.00-132.00	-	BROMOFORM	J-(all detects) UJ(all non-detects)
VOA11B LCS 06141 VOA11B LCSD 0614 (H12-SB01-05 H12-SS01-01 H20-SS01-02 H20-SS02-02 H3-SS01-02 H3-SS02-02 TB-SO-060716-01 TB-SO-060716-02 WDS-SB24-04 WDS-SB25-08 WDS-SB26-05)	ACETONE TOLUENE	184 284	168 333	36.00-164.00 77.00-121.00	- -	ACETONE TOLUENE	J+(all detects)
VOA11B LCS 06151 VOA11B LCSD 0615 (WDS-SB27-08 DUP)	ACETONE METHYLENE CHLORIDE	185 198	180 178	36.00-164.00 70.00-128.00	- -	ACETONE METHYLENE CHLORIDE	J+(all detects)

Project Name and Number: - USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C-ME

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0617 (H20-SS01-01 H20-SS02-01 H3-SS01-01 H3-SS02-01 WDS-SB21-05 WDS-SB22-05 WDS-SB27-08)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE TRANS-1,3-DICHLOROPROPENE	77.3 72.1 57 62.8 70 75.6 67.5	- - - - - - -	78.00-125.00 75.00-127.00 67.00-132.00 74.00-126.00 74.00-126.00 76.00-124.00 71.00-130.00	- - - - - - -	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE TRANS-1,3-DICHLOROPROPENE	J-(all detects) UJ(all non-detects)
VOA11B LCS 06201 (WDS-SB23-05)	BROMOFORM	65.5	-	67.00-132.00	-	BROMOFORM	J-(all detects) UJ(all non-detects)

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-SO-060716-01(Initial)	6/7/2016 8:50:00 AM	ACETONE METHYLENE CHLORIDE	0.009 mg/Kg 0.0017 mg/Kg	H20-SS01-01 H20-SS01-02 H20-SS02-01 H20-SS02-02 H3-SS01-01 H3-SS01-02 H3-SS02-01 H3-SS02-02
TB-SO-060716-02(Initial)	6/7/2016 9:00:00 AM	ACETONE METHYLENE CHLORIDE	0.011 mg/Kg 0.0062 mg/Kg	H12-SB01-05 H12-SS01-01 WDS-SB21-05 WDS-SB22-05 WDS-SB23-05 WDS-SB24-04 WDS-SB25-08 WDS-SB26-05 WDS-SB27-08 WDS-SB27-08 DUP

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H12-SB01-05(Initial)	ACETONE	0.074 mg/Kg	0.074U mg/Kg
H20-SS01-02(Initial)	ACETONE	0.060 mg/Kg	0.060U mg/Kg
WDS-SB24-04(Initial)	ACETONE	0.072 mg/Kg	0.072U mg/Kg
WDS-SB26-05(Initial)	ACETONE	0.068 mg/Kg	0.068U mg/Kg
WDS-SB27-08 DUP(Initial)	ACETONE	0.032 mg/Kg	0.032U mg/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-05	BERYLLIUM	J	0.11	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.051	0.19	LOQ	mg/Kg	
H12-SS01-01	BERYLLIUM	J	0.037	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.025	0.18	LOQ	mg/Kg	
	NICKEL	J	3.3	3.7	LOQ	mg/Kg	
H20-SS01-01	ARSENIC	J	1.2	2.0	LOQ	mg/Kg	J (all detects)
	SILVER	J	0.28	1.0	LOQ	mg/Kg	
H20-SS01-02	CADMIUM	J	0.036	0.19	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.0	3.7	LOQ	mg/Kg	
H20-SS02-01	ARSENIC	J	1.3	1.6	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.14	0.21	LOQ	mg/Kg	
	LEAD	J	2.9	4.1	LOQ	mg/Kg	
H20-SS02-02	LEAD	J	3.0	3.7	LOQ	mg/Kg	J (all detects)
H3-SS01-01	CADMIUM	J	0.045	0.20	LOQ	mg/Kg	J (all detects)
	NICKEL	J	2.8	3.9	LOQ	mg/Kg	
H3-SS01-02	BERYLLIUM	J	0.10	0.20	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.030	0.20	LOQ	mg/Kg	
H3-SS02-01	SILVER	J	0.53	0.77	LOQ	mg/Kg	J (all detects)
H3-SS02-02	BERYLLIUM	J	0.078	0.20	LOQ	mg/Kg	J (all detects)
H9-SS01-01	CADMIUM	J	0.043	0.21	LOQ	mg/Kg	J (all detects)
WDS-SB21-05	CADMIUM	J	0.027	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.6	3.5	LOQ	mg/Kg	

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-05	THALLIUM	JG	0.075	0.15	LOQ	mg/Kg	J (all detects)
H12-SS01-01	THALLIUM	JG	0.067	0.14	LOQ	mg/Kg	J (all detects)
H20-SS01-01	THALLIUM	JG	0.068	0.19	LOQ	mg/Kg	J (all detects)
H20-SS01-02	THALLIUM	JG	0.14	0.15	LOQ	mg/Kg	J (all detects)
H20-SS02-01	THALLIUM	JG	0.079	0.16	LOQ	mg/Kg	J (all detects)
H20-SS02-02	THALLIUM	JG	0.14	0.15	LOQ	mg/Kg	J (all detects)
H3-SS01-01	THALLIUM	JG	0.054	0.16	LOQ	mg/Kg	J (all detects)
H3-SS01-02	THALLIUM	JG	0.066	0.16	LOQ	mg/Kg	J (all detects)
H3-SS02-01	THALLIUM	JG	0.074	0.16	LOQ	mg/Kg	J (all detects)
H3-SS02-02	THALLIUM	JG	0.094	0.16	LOQ	mg/Kg	J (all detects)
H9-SS01-01	THALLIUM	JG	0.060	0.17	LOQ	mg/Kg	J (all detects)
WDS-SB21-05	THALLIUM	JG	0.052	0.14	LOQ	mg/Kg	J (all detects)

Project Name and Number: - USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606293

Laboratory: RTILABS

EDD Filename: EDD_1606293_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H12-SB01-05	2-Butanone [MEK]	J	0.0078	0.018	LOQ	mg/Kg	J (all detects)
H12-SS01-01	2-Butanone [MEK]	J	0.011	0.017	LOQ	mg/Kg	J (all detects)
H20-SS02-02	2-Butanone [MEK]	J	0.0069	0.022	LOQ	mg/Kg	J (all detects)
TB-SO-060716-01	ACETONE METHYLENE CHLORIDE	JYQ	0.0090	0.010	LOQ	mg/Kg	J (all detects)
		JB	0.0017	0.0050	LOQ	mg/Kg	
WDS-SB24-04	2-Butanone [MEK]	J	0.0092	0.015	LOQ	mg/Kg	J (all detects)
WDS-SB27-08 DUP	CARBON DISULFIDE	J	0.00030	0.00049	LOQ	mg/Kg	J (all detects)

Method: 8260C-ME
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H20-SS01-01	ACETONE	J	0.24	0.69	LOQ	mg/Kg	J (all detects)
H20-SS02-01	ACETONE	J	0.49	1.3	LOQ	mg/Kg	J (all detects)
H3-SS01-01	ACETONE	J	0.19	0.70	LOQ	mg/Kg	J (all detects)
H3-SS02-01	METHYLENE CHLORIDE	J	0.13	0.26	LOQ	mg/Kg	J (all detects)
WDS-SB22-05	ACETONE	J	0.21	0.51	LOQ	mg/Kg	J (all detects)
WDS-SB23-05	2-Butanone [MEK]	J	0.80	2.2	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H20-SS01-01	CARBAZOLE DIBENZOFURAN	J	0.15	0.24	LOQ	mg/Kg	J (all detects)
		J	0.16	0.24	LOQ	mg/Kg	
H20-SS01-02	DIBENZOFURAN	J	0.012	0.18	LOQ	mg/Kg	J (all detects)
H3-SS01-01	BENZOIC ACID	JQZ	0.65	1.2	LOQ	mg/Kg	J (all detects)
H3-SS01-02	BENZOIC ACID	JQZ	0.27	1.2	LOQ	mg/Kg	J (all detects)
H3-SS02-01	BENZOIC ACID	JQZ	0.38	1.2	LOQ	mg/Kg	J (all detects)
H3-SS02-02	BENZOIC ACID bis(2-chloroethoxy) methane	JQZ	0.31	1.2	LOQ	mg/Kg	J (all detects)
		J	0.034	0.20	LOQ	mg/Kg	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606392		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	20 soil samples and 1 trip blank for a project-specific list of VOCs, SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 29 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606392. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- ✓ Field rinsate blank data
- ✓ Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✗ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✗ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✗ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or during manual data review.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: BG02-SB01-05		Collected: 6/10/2016 9:40:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.13	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	1.4	J	0.75	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: BG02-SB01-06		Collected: 6/10/2016 9:40:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.13	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.035	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	1.8	J	0.76	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: BG02-SB02-05		Collected: 6/10/2016 10:15:00 AM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	6400		34	LOD	100	LOQ	mg/Kg	J-	Ms

Sample ID: BG02-SB02-05		Collected: 6/10/2016 10:15:00 AM			Analysis Type: Dilution-2			Dilution: 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	4000		140	LOD	340	LOQ	mg/Kg	J+	Ms

Sample ID: BG02-SB02-05		Collected: 6/10/2016 10:15:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.68	LOD	1.4	LOQ	mg/Kg	J	RI
BERYLLIUM	0.092	J	0.034	LOD	0.17	LOQ	mg/Kg	J	RI
CALCIUM	490	X	6.8	LOD	34	LOQ	mg/Kg	J+	Ms
LEAD	1.2	J	0.68	LOD	3.4	LOQ	mg/Kg	J	RI
MAGNESIUM	920	X	3.4	LOD	34	LOQ	mg/Kg	J-	Ms
MANGANESE	120	X	0.17	LOD	0.68	LOQ	mg/Kg	J-	Ms

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: BG02-SB02-05		Collected: 6/10/2016 10:15:00 AM			Analysis Type: Reanalysis-1			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	350		6.8	LOD	14	LOQ	mg/Kg	J+	Ms

Sample ID: BG02-SB02-10		Collected: 6/10/2016 10:20:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.041	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	1.1	J	0.78	LOD	3.9	LOQ	mg/Kg	J	RI
NICKEL	2.8	J	0.78	LOD	3.9	LOQ	mg/Kg	J	RI

Sample ID: BG02-SB03-05		Collected: 6/10/2016 9:10:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.11	J	0.033	LOD	0.17	LOQ	mg/Kg	J	RI
CADMIUM	0.025	J	0.033	LOD	0.17	LOQ	mg/Kg	J	RI
LEAD	1.8	J	0.66	LOD	3.3	LOQ	mg/Kg	J	RI

Sample ID: BG02-SB03-10		Collected: 6/10/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.026	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.5	J	0.73	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: BG02-SB04-04		Collected: 6/10/2016 8:55:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.70	LOD	1.4	LOQ	mg/Kg	J	RI
BERYLLIUM	0.091	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
CADMIUM	0.031	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
LEAD	1.1	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI
NICKEL	3.1	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: BG02-SB04-05		6/10/2016 8:50:00			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.10	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.030	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI, Fd
LEAD	1.2	J	0.75	LOD	3.8	LOQ	mg/Kg	J	RI
NICKEL	3.2	J	0.75	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: BG02-SB04-05 DUP		6/10/2016 8:50:00			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.15	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.037	U	0.037	LOD	0.18	LOQ	mg/Kg	UJ	Fd
LEAD	1.9	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS01-01		6/10/2016 9:35:00			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.033	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.0	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS02-01		6/10/2016 10:05:00			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.72	LOD	1.4	LOQ	mg/Kg	J	RI
LEAD	2.7	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS03-01		6/10/2016 9:05:00			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.99	J	0.73	LOD	1.5	LOQ	mg/Kg	J	RI
CADMIUM	0.043	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.4	J	0.73	LOD	3.7	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: BG02-SS04-01		Collected: 6/10/2016 8:45:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	2.6	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS05-01		Collected: 6/10/2016 9:55:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.039	J	0.037	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.5	J	0.73	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS06-01		Collected: 6/10/2016 9:25:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.031	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS07-01		Collected: 6/10/2016 9:00:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.088	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI
LEAD	2.5	J	0.75	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: BG02-SS08-01		Collected: 6/10/2016 8:40:00 AM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.75	J	0.41	LOD	0.83	LOQ	mg/Kg	J	RI
ARSENIC	0.99	J	0.83	LOD	1.7	LOQ	mg/Kg	J	RI
COBALT	0.68	J	0.21	LOD	0.83	LOQ	mg/Kg	J	RI
LEAD	2.9	J	0.83	LOD	4.1	LOQ	mg/Kg	J	RI
NICKEL	2.2	J	0.83	LOD	4.1	LOQ	mg/Kg	J	RI

Sample ID: H17-SS01-01		Collected: 6/9/2016 1:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.051	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.034	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6010C	Matrix: Soil

Sample ID:H17-SS02-01 Collected: 6/9/2016 3:20:00 PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.056	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.082	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID:H17-SS03-01 Collected: 6/9/2016 2:25:00 PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.10	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID:BG02-SB01-05 Collected: 6/10/2016 9:40:00 AM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.056	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID:BG02-SB01-06 Collected: 6/10/2016 9:40:00 AM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.054	J	0.036	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID:BG02-SB02-05 Collected: 6/10/2016 10:15:00 AM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.051	J	0.034	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID:BG02-SB02-10 Collected: 6/10/2016 10:20:00 AM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.042	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL			Matrix: Soil						

Sample ID: BG02-SB03-05		Collected: 6/10/2016 9:10:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.048	J	0.034	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SB03-10		Collected: 6/10/2016 9:15:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.14	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SB04-05		Collected: 6/10/2016 8:50:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.050	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SB04-05 DUP		Collected: 6/10/2016 8:50:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.043	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS01-01		Collected: 6/10/2016 9:35:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.095	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS02-01		Collected: 6/10/2016 10:05:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.056	J	0.036	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS03-01		Collected: 6/10/2016 9:05:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.065	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL			Matrix: Soil						

Sample ID: BG02-SS04-01		Collected: 6/10/2016 8:45:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.063	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS05-01		Collected: 6/10/2016 9:55:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.059	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS06-01		Collected: 6/10/2016 9:25:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.088	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS07-01		Collected: 6/10/2016 9:00:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.071	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: BG02-SS08-01		Collected: 6/10/2016 8:40:00 AM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.052	J	0.042	LOD	0.17	LOQ	mg/Kg	J	RI	

Sample ID: H17-SS01-01		Collected: 6/9/2016 1:40:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.081	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H17-SS02-01		Collected: 6/9/2016 3:20:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.089	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI	

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID:H17-SS03-01 Collected: 6/9/2016 2:25:00 PM Analysis Type: Initial Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.082	J	0.039	LOD	0.15	LOQ	mg/Kg	J	RI

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Soil						

Sample ID:H17-SS02-01 Collected: 6/9/2016 3:20:00 PM Analysis Type: Initial-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0016		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
2-METHYLNAPHTHALENE	0.0027		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
ACENAPHTHENE	0.00079		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
ACENAPHTHYLENE	0.0013		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
ANTHRACENE	0.010		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
BENZ(A)ANTHRACENE	0.0098		0.00078	LOD	0.00078	LOQ	mg/Kg	J	Lcs, Surr
BENZO(A)PYRENE	0.0077		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
BENZO(B)FLUORANTHENE	0.018	Y	0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
BENZO(G,H,I)PERYLENE	0.00078	U	0.00078	LOD	0.00078	LOQ	mg/Kg	UJ	Surr
BENZO(K)FLUORANTHENE	0.0033		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
CHRYSENE	0.0079		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.00078	U	0.00078	LOD	0.00078	LOQ	mg/Kg	UJ	Surr
FLUORANTHENE	0.016		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
FLUORENE	0.0011		0.00078	LOD	0.00078	LOQ	mg/Kg	J	Lcs, Surr
INDENO(1,2,3-CD)PYRENE	0.00078	U	0.00078	LOD	0.00078	LOQ	mg/Kg	UJ	Surr
NAPHTHALENE	0.0030		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr
PHENANTHRENE	0.012		0.00078	LOD	0.00078	LOQ	mg/Kg	J	Lcs, Surr
PYRENE	0.018		0.00078	LOD	0.00078	LOQ	mg/Kg	J-	Surr

Sample ID:H17-SS03-01 Collected: 6/9/2016 2:25:00 PM Analysis Type: Initial-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.0089		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Lcs
FLUORENE	0.00092		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Lcs

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA									
Method:	8270D SIM	Matrix:	Soil							

Sample ID:	H17-SS03-01	Collected:	6/9/2016 2:25:00 PM	Analysis Type:	Initial-BASE/ NEUTRAL	Dilution:	1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PHENANTHRENE	0.0089		0.00078	LOD	0.00078	LOQ	mg/Kg	J+	Lcs	

Method Category:	SVOA									
Method:	8270D-MOD	Matrix:	Soil							

Sample ID:	H17-SS02-01	Collected:	6/9/2016 3:20:00 PM	Analysis Type:	Initial-ACID	Dilution:	1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZOIC ACID	0.70	JYZ	0.39	LOD	1.2	LOQ	mg/Kg	J	RI	

Method Category:	VOA									
Method:	8260C	Matrix:	Soil							

Sample ID:	TB-SO-060916-01	Collected:	6/9/2016 9:10:00 AM	Analysis Type:	Initial	Dilution:	1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACETONE	0.0074	JYQ	0.0020	LOD	0.010	LOQ	mg/Kg	J	RI	

Method Category:	VOA									
Method:	8260C-ME	Matrix:	Soil							

Sample ID:	H17-SS01-01	Collected:	6/9/2016 1:40:00 PM	Analysis Type:	Initial	Dilution:	139			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BROMOFORM	0.096	UQ	0.096	LOD	0.16	LOQ	mg/Kg	UJ	Lcs	

Sample ID:	H17-SS02-01	Collected:	6/9/2016 3:20:00 PM	Analysis Type:	Initial	Dilution:	143.5			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BROMOFORM	0.10	UQ	0.10	LOD	0.17	LOQ	mg/Kg	UJ	Lcs	
METHYLENE CHLORIDE	0.091	J	0.10	LOD	0.34	LOQ	mg/Kg	J	RI	

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method Category: VOA	
Method: 8260C-ME	Matrix: Soil

Sample ID:H17-SS03-01

Collected: 6/9/2016 2:25:00 PM Analysis Type: Initial

Dilution: 103.2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.072	UQ	0.072	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.055	J	0.072	LOD	0.24	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606392

EDD Filename: EDD_1606392_SEDD_2a_v13

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40215	7/1/2016 12:04:54 PM	POTASSIUM SILVER	4.5 mg/Kg 0.063 mg/Kg	BG02-SB01-05 BG02-SB01-06 BG02-SB02-05 BG02-SB02-10 BG02-SB03-05 BG02-SB03-10 BG02-SB04-04 BG02-SB04-05 BG02-SB04-05 DUP BG02-SS01-01 BG02-SS02-01 BG02-SS03-01 BG02-SS04-01 BG02-SS05-01 BG02-SS06-01

Surrogate Outlier Report

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H17-SS02-01 (Initial)	2-FLUOROBIPHENYL	1.26	46.00-115.00	All Base/Neutral Target Analytes	J- (all detects) UJ (all non-detects)

Project Name and Number: - USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG02-SB02-05MS (BG02-SB02-05)	BENZ(A)ANTHRACENE PHENANTHRENE	124 115	- -	54.00-122.00 49.00-113.00	- -	BENZ(A)ANTHRACENE PHENANTHRENE	J+ (all detects)

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG02-SB02-05MS (Dry) BG02-SB02-05MSD (Dry) (BG02-SB02-05)	IRON MAGNESIUM MANGANESE	-83.6 - 77.5	-25.6 45.5 82.4	81.00-118.00 78.00-115.00 84.00-114.00	- - -	IRON MAGNESIUM MANGANESE	J-(all detects) UJ(all non-detects)
BG02-SB02-05MS (Dry) BG02-SB02-05MSD (Dry) (BG02-SB02-05)	ALUMINUM CALCIUM POTASSIUM	1040 - 134	386 152 -	74.00-119.00 81.00-116.00 81.00-116.00	- - -	ALUMINUM CALCIUM POTASSIUM	J+(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40193 (H17-SS02-01 H17-SS03-01)	BENZ(A)ANTHRACENE FLUORENE PHENANTHRENE	134 116 129	- - -	54.00-122.00 47.00-114.00 49.00-113.00	- - -	BENZ(A)ANTHRACENE FLUORENE PHENANTHRENE	J+ (all detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06201 (H17-SS01-01 H17-SS02-01 H17-SS03-01)	BROMOFORM	65.5	-	67.00-132.00	-	BROMOFORM	J-(all detects) UJ(all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 6010C

Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG02-SB04-05 (Dry)	BG02-SB04-05 DUP (Dry)			
CADMIUM	0.030	0.18 U	200	50.00	J (all detects) UJ (all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG02-SB01-05	BERYLLIUM	J	0.13	0.19	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.4	3.8	LOQ	mg/Kg	
BG02-SB01-06	BERYLLIUM	J	0.13	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.035	0.19	LOQ	mg/Kg	
	LEAD	J	1.8	3.8	LOQ	mg/Kg	
BG02-SB02-05	ARSENIC	J	1.1	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.092	0.17	LOQ	mg/Kg	
	LEAD	J	1.2	3.4	LOQ	mg/Kg	
BG02-SB02-10	BERYLLIUM	J	0.041	0.19	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.1	3.9	LOQ	mg/Kg	
	NICKEL	J	2.8	3.9	LOQ	mg/Kg	
BG02-SB03-05	BERYLLIUM	J	0.11	0.17	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.025	0.17	LOQ	mg/Kg	
	LEAD	J	1.8	3.3	LOQ	mg/Kg	
BG02-SB03-10	CADMIUM	J	0.026	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.5	3.6	LOQ	mg/Kg	
BG02-SB04-04	ARSENIC	J	1.1	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.091	0.17	LOQ	mg/Kg	
	CADMIUM	J	0.031	0.17	LOQ	mg/Kg	
	LEAD	J	1.1	3.5	LOQ	mg/Kg	
	NICKEL	J	3.1	3.5	LOQ	mg/Kg	
BG02-SB04-05	BERYLLIUM	J	0.10	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.030	0.19	LOQ	mg/Kg	
	LEAD	J	1.2	3.8	LOQ	mg/Kg	
	NICKEL	J	3.2	3.8	LOQ	mg/Kg	
BG02-SB04-05 DUP	BERYLLIUM	J	0.15	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.9	3.7	LOQ	mg/Kg	
BG02-SS01-01	CADMIUM	J	0.033	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.0	3.6	LOQ	mg/Kg	
BG02-SS02-01	ARSENIC	J	1.1	1.4	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.7	3.6	LOQ	mg/Kg	
BG02-SS03-01	ARSENIC	J	0.99	1.5	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.043	0.18	LOQ	mg/Kg	
	LEAD	J	3.4	3.7	LOQ	mg/Kg	
BG02-SS04-01	LEAD	J	2.6	3.6	LOQ	mg/Kg	J (all detects)
BG02-SS05-01	CADMIUM	J	0.039	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.5	3.7	LOQ	mg/Kg	
BG02-SS06-01	CADMIUM	J	0.031	0.19	LOQ	mg/Kg	J (all detects)
BG02-SS07-01	BERYLLIUM	J	0.088	0.19	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.5	3.8	LOQ	mg/Kg	
BG02-SS08-01	ANTIMONY	J	0.75	0.83	LOQ	mg/Kg	J (all detects)
	ARSENIC	J	0.99	1.7	LOQ	mg/Kg	
	COBALT	J	0.68	0.83	LOQ	mg/Kg	
	LEAD	J	2.9	4.1	LOQ	mg/Kg	
	NICKEL	J	2.2	4.1	LOQ	mg/Kg	
H17-SS01-01	BERYLLIUM	J	0.051	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.034	0.19	LOQ	mg/Kg	

Project Name and Number: - USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H17-SS02-01	BERYLLIUM	J	0.056	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.082	0.19	LOQ	mg/Kg	
H17-SS03-01	BERYLLIUM	J	0.10	0.19	LOQ	mg/Kg	J (all detects)

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG02-SB01-05	THALLIUM	J	0.056	0.15	LOQ	mg/Kg	J (all detects)
BG02-SB01-06	THALLIUM	J	0.054	0.14	LOQ	mg/Kg	J (all detects)
BG02-SB02-05	THALLIUM	J	0.051	0.14	LOQ	mg/Kg	J (all detects)
BG02-SB02-10	THALLIUM	J	0.042	0.15	LOQ	mg/Kg	J (all detects)
BG02-SB03-05	THALLIUM	J	0.048	0.14	LOQ	mg/Kg	J (all detects)
BG02-SB03-10	THALLIUM	J	0.14	0.15	LOQ	mg/Kg	J (all detects)
BG02-SB04-05	THALLIUM	J	0.050	0.14	LOQ	mg/Kg	J (all detects)
BG02-SB04-05 DUP	THALLIUM	J	0.043	0.15	LOQ	mg/Kg	J (all detects)
BG02-SS01-01	THALLIUM	J	0.095	0.15	LOQ	mg/Kg	J (all detects)
BG02-SS02-01	THALLIUM	J	0.056	0.14	LOQ	mg/Kg	J (all detects)
BG02-SS03-01	THALLIUM	J	0.065	0.15	LOQ	mg/Kg	J (all detects)
BG02-SS04-01	THALLIUM	J	0.063	0.14	LOQ	mg/Kg	J (all detects)
BG02-SS05-01	THALLIUM	J	0.059	0.15	LOQ	mg/Kg	J (all detects)
BG02-SS06-01	THALLIUM	J	0.088	0.15	LOQ	mg/Kg	J (all detects)
BG02-SS07-01	THALLIUM	J	0.071	0.15	LOQ	mg/Kg	J (all detects)
BG02-SS08-01	THALLIUM	J	0.052	0.17	LOQ	mg/Kg	J (all detects)
H17-SS01-01	THALLIUM	J	0.081	0.15	LOQ	mg/Kg	J (all detects)
H17-SS02-01	THALLIUM	J	0.089	0.16	LOQ	mg/Kg	J (all detects)
H17-SS03-01	THALLIUM	J	0.082	0.15	LOQ	mg/Kg	J (all detects)

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-SO-060916-01	ACETONE	JYQ	0.0074	0.010	LOQ	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606392

Laboratory: RTILABS

EDD Filename: EDD_1606392_SEDD_2a_v13

eQAPP Name: Former_Camp_Hero

Method: 8260C-ME
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H17-SS02-01	METHYLENE CHLORIDE	J	0.091	0.34	LOQ	mg/Kg	J (all detects)
H17-SS03-01	METHYLENE CHLORIDE	J	0.055	0.24	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H17-SS02-01	BENZOIC ACID	JYZ	0.70	1.2	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606467		
Date(s) of Collection:	June 12 th , 2016		
Number/Type Samples & Analyses:	20 soil samples and 1 trip blank for a project-specific list of VOCs, STAR VOCs, SVOCs, PAHs, PCBs, lead, and metals		
Data Reviewer:	Zachary Neigh AECOM/Baltimore MD		
Completed:	August 30, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606467. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The initial analysis of the LCS demonstrated a slightly high bias for several PAH compounds. The re-analysis demonstrated acceptable results. However, the lab flagged the samples on the original analysis. The affected samples were H18-SS01-01 (MS/MSD), H18-SS01-01 DUP, H18-SS01-02, H18-SS02-01, and H18-SS02-02.

The following table defines the data qualifiers assigned by ADR and/or during manual data review of the ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: H18-SS01-01		Collected: 6/12/2016 3:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.033	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI, Fd
LEAD	9.2		0.70	LOD	3.5	LOQ	mg/Kg	J	Fd

Sample ID: H18-SS01-01 DUP		Collected: 6/12/2016 3:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.036	U	0.036	LOD	0.18	LOQ	mg/Kg	UJ	Fd
LEAD	2.7	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI, Fd
NICKEL	3.2	J	0.72	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: H18-SS01-02		Collected: 6/12/2016 3:45:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.031	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.3	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI

Sample ID: H18-SS02-01		Collected: 6/12/2016 4:00:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.17	J	0.18	LOD	0.70	LOQ	mg/Kg	J	RI

Sample ID: H18-SS02-02		Collected: 6/12/2016 4:05:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.69	LOD	1.4	LOQ	mg/Kg	J	RI
LEAD	1.1	J	0.69	LOD	3.4	LOQ	mg/Kg	J	RI
NICKEL	2.2	J	0.69	LOD	3.4	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB10-08		Collected: 6/12/2016 1:50:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.1	J	0.74	LOD	1.5	LOQ	mg/Kg	J	RI
LEAD	2.1	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	METALS		
Method:	6010C	Matrix:	Soil

Method Category:	METALS		
Method:	6010C-STAR	Matrix:	Soil

Sample ID: H4-SB02-05		Collected: 6/12/2016 2:15:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3.2	J	0.74	LOD	3.7	LOQ	mg/Kg	J	RI

Sample ID: H4-SB03-05		Collected: 6/12/2016 2:00:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	2.8	J	0.77	LOD	3.9	LOQ	mg/Kg	J	RI

Sample ID: H6-SS02-01		Collected: 6/12/2016 11:30:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3.0	J	0.85	LOD	4.2	LOQ	mg/Kg	J	RI

Sample ID: H6-SS03-01		Collected: 6/12/2016 11:45:00 AM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	7.5	J	2.9	LOD	15	LOQ	mg/Kg	J	RI

Sample ID: P113-SB01-05		Collected: 6/12/2016 12:35:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3.1	J	0.76	LOD	3.8	LOQ	mg/Kg	J	RI

Sample ID: P113-SB02-04		Collected: 6/12/2016 12:30:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	2.2	J	0.76	LOD	3.8	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A-TL	Matrix: Soil

Sample ID: H18-SS01-01		Collected: 6/12/2016 3:40:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.050	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H18-SS01-01 DUP		Collected: 6/12/2016 3:40:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.035	J	0.034	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H18-SS01-02		Collected: 6/12/2016 3:45:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.041	J	0.034	LOD	0.14	LOQ	mg/Kg	J	RI

Sample ID: H18-SS02-02		Collected: 6/12/2016 4:05:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.041	JG	0.033	LOD	0.13	LOQ	mg/Kg	J	RI

Sample ID: WDS-SB10-08		Collected: 6/12/2016 1:50:00 PM		Analysis Type: Initial				Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.087	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI

Method Category:	SVOA	
Method:	8082A	Matrix: Soil

Sample ID: H18-SS01-01 DUP		Collected: 6/12/2016 3:40:00 PM		Analysis Type: Initial				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8082A	Matrix:	Soil

Sample ID:H18-SS01-01 DUP		6/12/2016 3:40:00		Analysis Type: Initial				Dilution: 1	
		Collected: PM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.0072	U	0.0072	LOD	0.036	LOQ	mg/Kg	UJ	Surr

Sample ID:H6-SS01-01		6/12/2016 11:35:00		Analysis Type: Reanalysis-2				Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.020	U	0.020	LOD	0.10	LOQ	mg/Kg	UJ	Surr

Sample ID:H6-SS03-01		6/12/2016 11:45:00		Analysis Type: Initial				Dilution: 1	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
AROCLOR 1221	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
AROCLOR 1232	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
AROCLOR 1242	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
AROCLOR 1248	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
AROCLOR 1254	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
AROCLOR 1260	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
Aroclor 1262	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr
Aroclor 1268	0.030	U	0.030	LOD	0.15	LOQ	mg/Kg	UJ	Surr

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID: H18-SS01-01		Collected: 6/12/2016 3:40:00 PM			Analysis Type: Dilution-1-BASE/ NEUTRAL			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.035		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
BENZ(A)ANTHRACENE	0.12		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
BENZO(A)PYRENE	0.10		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
BENZO(B)FLUORANTHENE	0.14		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms
BENZO(G,H,I)PERYLENE	0.055		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms, Fd
BENZO(K)FLUORANTHENE	0.065		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
CHRYSENE	0.12		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
FLUORANTHENE	0.30		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
INDENO(1,2,3-CD)PYRENE	0.066		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
PHENANTHRENE	0.18		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms
PYRENE	0.23		0.0072	LOD	0.0072	LOQ	mg/Kg	J	Ms, Ms, Ms

Sample ID: H18-SS01-01		Collected: 6/12/2016 3:40:00 PM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0063	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Ms, Ms, Lcs, Fd
2-METHYLNAPHTHALENE	0.0060	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Ms, Ms, Fd
ACENAPHTHENE	0.015	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Ms, Ms
ACENAPHTHYLENE	0.0023	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Ms
DIBENZO(A,H)ANTHRACENE	0.017		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Ms, Ms
FLUORENE	0.018	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Ms, Ms, Fd
NAPHTHALENE	0.0053		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Ms, Ms, Fd

Sample ID: H18-SS01-01 DUP		Collected: 6/12/2016 3:40:00 PM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.012	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Lcs, Fd
2-METHYLNAPHTHALENE	0.014	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.0012		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
FLUORENE	0.031	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
NAPHTHALENE	0.020		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Soil

Sample ID: H18-SS02-01	Collected: 6/12/2016 4:00:00 PM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.0058	Q	0.00072	LOD	0.00072	LOQ	mg/Kg	J+	Lcs

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Soil

Sample ID: H18-SS01-01	Collected: 6/12/2016 3:40:00 PM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.71	UQ	0.71	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.018	J	0.018	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: H18-SS01-01 DUP	Collected: 6/12/2016 3:40:00 PM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.71	UQ	0.71	LOD	1.1	LOQ	mg/Kg	UJ	Lcs
CARBAZOLE	0.016	J	0.018	LOD	0.17	LOQ	mg/Kg	J	RI

Sample ID: H18-SS01-02	Collected: 6/12/2016 3:45:00 PM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.70	UQ	0.70	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H18-SS02-01	Collected: 6/12/2016 4:00:00 PM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.71	UQ	0.71	LOD	1.1	LOQ	mg/Kg	UJ	Lcs

Sample ID: H18-SS02-02	Collected: 6/12/2016 4:05:00 PM		Analysis Type: Initial-BASE/ NEUTRAL		Dilution: 1				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,3'-DICHLOROBENZIDINE	0.68	UQ	0.68	LOD	1.0	LOQ	mg/Kg	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Soil

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
1,2-DICHLOROBENZENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
1,3-DICHLOROBENZENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
1,4-DICHLOROBENZENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
2,4-DINITROTOLUENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
2,6-DINITROTOLUENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
2-CHLORONAPHTHALENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
2-NITROANILINE	0.018	U	0.018	LOD	0.35	LOQ	mg/Kg	UJ	Surr
3,3'-DICHLOROBENZIDINE	0.73	UQX	0.73	LOD	1.1	LOQ	mg/Kg	UJ	Ms, Lcs, Surr
3-NITROANILINE	0.018	U	0.018	LOD	0.35	LOQ	mg/Kg	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.092	U	0.092	LOD	0.22	LOQ	mg/Kg	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
4-NITROANILINE	0.092	U	0.092	LOD	0.35	LOQ	mg/Kg	UJ	Surr
BENZYL ALCOHOL	0.018	U	0.018	LOD	0.73	LOQ	mg/Kg	UJ	Surr
bis(2-chloroethoxy) methane	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.037	U	0.037	LOD	0.18	LOQ	mg/Kg	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.018	UYZ	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.037	U	0.037	LOD	0.18	LOQ	mg/Kg	UJ	Surr
Butyl benzyl phthalate	0.037	U	0.037	LOD	0.18	LOQ	mg/Kg	UJ	Surr
CARBAZOLE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
DIBENZOFURAN	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
DIETHYL PHTHALATE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
DIMETHYL PHTHALATE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
DI-N-BUTYL PHTHALATE	0.037	U	0.037	LOD	0.18	LOQ	mg/Kg	UJ	Surr
DI-N-OCTYL PHTHALATE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBENZENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
HEXACHLOROBUTADIENE	0.018	U	0.018	LOD	0.055	LOQ	mg/Kg	UJ	Surr
HEXACHLOROETHANE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
ISOPHORONE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
NITROBENZENE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
N-NITROSODIMETHYLAMINE	0.018	UY	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr
N-Nitrosodi-n-propylamine	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA								
Method:	8270D-MOD	Matrix:	Soil						

Sample ID: WDS-SB10-08	6/12/2016 1:50:00			Initial-BASE/				Dilution: 1	
	Collected: PM	Analysis Type: NEUTRAL							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIPHENYLAMINE	0.018	U	0.018	LOD	0.18	LOQ	mg/Kg	UJ	Surr

Method Category:	VOA								
Method:	8260C	Matrix:	Soil						

Sample ID: H18-SS01-01	6/12/2016 3:40:00			Analysis Type: Initial				Dilution: 1.07	
	Collected: PM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.096	BYQ	0.0023	LOD	0.012	LOQ	mg/Kg	UJ	Lcs, Mb
BROMOFORM	0.00069	UYQ	0.00069	LOD	0.0012	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00069	UQ	0.00069	LOD	0.0012	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0036	JBYQ	0.0023	LOD	0.0058	LOQ	mg/Kg	UJ	Mb, Fd, Tb

Sample ID: H18-SS01-01 DUP	6/12/2016 3:40:00			Analysis Type: Initial				Dilution: 0.99	
	Collected: PM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.062	BYQ	0.0022	LOD	0.011	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.00065	UYQ	0.00065	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00065	UQ	0.00065	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0022	UBYQ	0.0022	LOD	0.0054	LOQ	mg/Kg	UJ	Fd

Sample ID: H18-SS01-02	6/12/2016 3:45:00			Analysis Type: Initial				Dilution: 0.91	
	Collected: PM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.025	BYQ	0.0020	LOD	0.0098	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.00059	UYQ	0.00059	LOD	0.00098	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00059	UQ	0.00059	LOD	0.00098	LOQ	mg/Kg	UJ	Lcs

Sample ID: H18-SS02-01	6/12/2016 4:00:00			Analysis Type: Initial				Dilution: 1.01	
	Collected: PM								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.048	BYQ	0.0022	LOD	0.011	LOQ	mg/Kg	UJ	Lcs, Mb, Tb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	VOA									
Method:	8260C			Matrix: Soil						

Sample ID: H18-SS02-01		Collected: 6/12/2016 4:00:00 PM			Analysis Type: Initial			Dilution: 1.01		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BROMOFORM	0.00065	UYQ	0.00065	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs	
CHLORODIBROMOMETHANE	0.00065	UQ	0.00065	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs	

Sample ID: H18-SS02-02		Collected: 6/12/2016 4:05:00 PM			Analysis Type: Initial			Dilution: 1.04		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACETONE	0.033	BYQ	0.0021	LOD	0.011	LOQ	mg/Kg	UJ	Lcs, Mb, Tb	
BROMOFORM	0.00064	UYQ	0.00064	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs	
CHLORODIBROMOMETHANE	0.00064	UQ	0.00064	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs	
METHYLENE CHLORIDE	0.0032	JBQ	0.0021	LOD	0.0054	LOQ	mg/Kg	UJ	Lcs, Mb, Tb	

Sample ID: TB-SO-061216-02		Collected: 6/12/2016 8:05:00 AM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACETONE	0.0095	JYBQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Mb	
BROMOFORM	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs	
CIS-1,3-DICHLOROPROPENE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs	
METHYLENE CHLORIDE	0.0012	JYBQ	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs, Mb	
STYRENE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs	

Sample ID: WDS-SB10-08		Collected: 6/12/2016 1:50:00 PM			Analysis Type: Initial			Dilution: 0.77		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ACETONE	0.060	BYQ	0.0017	LOD	0.0086	LOQ	mg/Kg	UJ	Lcs, Mb, Tb	
BROMOFORM	0.00052	UYQ	0.00052	LOD	0.00086	LOQ	mg/Kg	UJ	Lcs	
CHLORODIBROMOMETHANE	0.00052	UQ	0.00052	LOD	0.00086	LOQ	mg/Kg	UJ	Lcs	
METHYLENE CHLORIDE	0.0029	JBQ	0.0017	LOD	0.0043	LOQ	mg/Kg	UJ	Lcs, Mb, Tb	

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C-ME-STAR	Matrix: Soil

Sample ID: P113-SS02-01 Collected: 6/12/2016 12:15:00 PM Analysis Type: Initial Dilution: 125.4

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRIMETHYLBENZENE	0.089	UQ	0.089	LOD	0.15	LOQ	mg/Kg	UJ	Ms, Lcs
NAPHTHALENE	0.089	UZ	0.089	LOD	0.74	LOQ	mg/Kg	UJ	Ms
p-Isopropyltoluene [p-Cymene]	0.089	U	0.089	LOD	0.15	LOQ	mg/Kg	UJ	Ms

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606467

EDD Filename: EDD_1606467_SEDD_2a_v25

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0616	6/16/2016 9:26:00 AM	ACETONE METHYLENE CHLORIDE	0.011 mg/Kg 0.030 mg/Kg	H18-SS01-01 H18-SS01-01 DUP H18-SS01-02
VOA11B MBLK 0617	6/17/2016 7:48:00 AM	ACETONE METHYLENE CHLORIDE	0.0078 mg/Kg 0.0042 mg/Kg	H18-SS02-01 H18-SS02-02 WDS-SB10-08
VOA11B MBLK3 061	6/15/2016 8:54:00 PM	ACETONE METHYLENE CHLORIDE	0.010 mg/Kg 0.0085 mg/Kg	TB-SO-061216-02

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H18-SS01-01 DUP(Initial)	ACETONE	0.062 mg/Kg	0.062U mg/Kg
H18-SS01-01(Initial)	ACETONE	0.096 mg/Kg	0.096U mg/Kg
H18-SS01-01(Initial)	METHYLENE CHLORIDE	0.0036 mg/Kg	0.0058U mg/Kg
H18-SS01-02(Initial)	ACETONE	0.025 mg/Kg	0.025U mg/Kg
H18-SS02-01(Initial)	ACETONE	0.048 mg/Kg	0.048U mg/Kg
H18-SS02-02(Initial)	ACETONE	0.033 mg/Kg	0.033U mg/Kg
H18-SS02-02(Initial)	METHYLENE CHLORIDE	0.0032 mg/Kg	0.0054U mg/Kg
TB-SO-061216-02(Initial)	ACETONE	0.0095 mg/Kg	0.010U mg/Kg
TB-SO-061216-02(Initial)	METHYLENE CHLORIDE	0.0012 mg/Kg	0.0050U mg/Kg
WDS-SB10-08(Initial)	ACETONE	0.060 mg/Kg	0.060U mg/Kg
WDS-SB10-08(Initial)	METHYLENE CHLORIDE	0.0029 mg/Kg	0.0043U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H18-SS01-01 DUP (Initial)	DECACHLOROBIPHENYL	56.8	60.00-125.00	All Target Analytes	J- (all detects) UJ (all non-detects)
H6-SS01-01 (Reanalysis-2)	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	17.3 16.3	60.00-125.00 44.00-130.00	All Target Analytes	J-(all detects) UJ(all non-detects)
H6-SS03-01 (Initial)	DECACHLOROBIPHENYL	46.3	60.00-125.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H18-SS01-01 (Initial)	Terphenyl-d14	48.6	54.00-127.00	No Affected Compounds	
WDS-SB10-08 (Initial)	2-FLUOROBIPHENYL Terphenyl-d14	39.7 39.9	44.00-115.00 54.00-127.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB10-08MS WDS-SB10-08MSD (WDS-SB10-08)	3,3'-DICHLOROBENZIDINE	0	0	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H18-SS01-01MS H18-SS01-01MSD (H18-SS01-01)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE BENZO(B)FLUORANTHENE DIBENZO(A,H)ANTHRACENE FLUORENE NAPHTHALENE	139 128 - - - - 124	196 182 248 764 149 301 194	43.00-111.00 39.00-114.00 44.00-111.00 53.00-128.00 50.00-129.00 47.00-114.00 38.00-111.00	33.87 (25.00) 34.9 (25.00) 73.61 (25.00) 46.6 (25.00) 43.15 (25.00) 82.93 (25.00) 43.97 (25.00)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE BENZO(B)FLUORANTHENE DIBENZO(A,H)ANTHRACENE FLUORENE NAPHTHALENE	J(all detects)
H18-SS01-01MS H18-SS01-01MSD (H18-SS01-01)	ANTHRACENE BENZ(A)ANTHRACENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE CHRYSENE FLUORANTHENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE PYRENE	0.904 10.1 -3.83 -16.1 -83.8 -47.9 -253 5.55 -194 -119	280 733 467 197 211 552 1530 283 1410 1220	50.00-114.00 54.00-122.00 50.00-125.00 49.00-127.00 56.00-123.00 57.00-118.00 55.00-119.00 49.00-130.00 49.00-113.00 55.00-117.00	71.94 (25.00) 60.39 (25.00) 50.17 (25.00) 45.03 (25.00) 57.08 (25.00) 56.51 (25.00) 65.79 (25.00) 45.53 (25.00) 87.26 (25.00) 62.31 (25.00)	ANTHRACENE BENZ(A)ANTHRACENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE CHRYSENE FLUORANTHENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE PYRENE	J(all detects) UJ(all non-detects)
H18-SS01-01MSD (H18-SS01-01)	ACENAPHTHYLENE	-	133	39.00-116.00	-	ACENAPHTHYLENE	J+(all detects)

Method: 8260C-ME-STAR
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P113-SS02-01MS P113-SS02-01MSD (P113-SS02-01)	1,2,4-TRIMETHYLBENZENE NAPHTHALENE p-Isopropyltoluene [p-Cymene]	74 - 70.3	71.6 58.9 69.5	75.00-123.00 62.00-129.00 73.00-127.00	- - -	1,2,4-TRIMETHYLBENZENE NAPHTHALENE p-Isopropyltoluene [p-Cymene]	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40223 (H18-SS01-01 H18-SS01-01 DUP H18-SS01-02 H18-SS02-01 H18-SS02-02 WDS-SB10-08)	3,3'-DICHLOROBENZIDINE	0	-	22.00-121.00	-	3,3'-DICHLOROBENZIDINE	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40258 (H18-SS01-01 H18-SS01-01 DUP H18-SS01-02 H18-SS02-01 H18-SS02-02)	1-METHYLNAPHTHALENE	115	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Method: 8270D-SIM-STAR
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
1-LCS-40258 (H18-SS01-01 H18-SS01-01 DUP H18-SS01-02 H18-SS02-01 H18-SS02-02)	ACENAPHTHENE ACENAPHTHYLENE ANTHRACENE BENZ(A)ANTHRACENE BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE FLUORENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE PYRENE	120 120 116 133 148 121 122 118 151 120 126	- - - - - - - - - - -	44.00-111.00 39.00-116.00 50.00-114.00 54.00-122.00 53.00-128.00 57.00-118.00 55.00-119.00 47.00-114.00 49.00-130.00 49.00-113.00 55.00-117.00	- - - - - - - - - - -	ACENAPHTHENE ACENAPHTHYLENE ANTHRACENE BENZ(A)ANTHRACENE BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE FLUORENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE PYRENE	J+(all detects)

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCSD2 061 (TB-SO-061216-02)	BROMOFORM CIS-1,3-DICHLOROPROPENE STYRENE	- - -	64 70.2 75	67.00-132.00 74.00-126.00 76.00-124.00	- - -	BROMOFORM CIS-1,3-DICHLOROPROPENE STYRENE	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0615 VOA11B LCSD2 061 (TB-SO-061216-02)	1,2,3-TRICHLOROPROPANE ACETONE METHYLENE CHLORIDE	127 203 191	- 201 168	73.00-125.00 36.00-164.00 70.00-128.00	- - -	1,2,3-TRICHLOROPROPANE ACETONE METHYLENE CHLORIDE	J+(all detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06161 VOA11B LCSD 0616 (H18-SS01-01 H18-SS01-01 DUP H18-SS01-02)	BROMOFORM CHLORODIBROMOMETHANE	64.9 72.3	60 71.2	67.00-132.00 74.00-126.00	- -	BROMOFORM CHLORODIBROMOMETHANE	J-(all detects) UJ(all non-detects)
VOA11B LCS 06161 VOA11B LCSD 0616 (H18-SS01-01 H18-SS01-01 DUP H18-SS01-02)	2-Butanone [MEK] ACETONE	168 273	- 231	51.00-148.00 36.00-164.00	- -	2-Butanone [MEK] ACETONE	J+(all detects)
VOA11B LCS 06171 VOA11B LCSD 0617 (H18-SS02-01 H18-SS02-02 WDS-SB10-08)	BROMOFORM CHLORODIBROMOMETHANE	65.5 -	58.3 70	67.00-132.00 74.00-126.00	- -	BROMOFORM CHLORODIBROMOMETHANE	J-(all detects) UJ(all non-detects)
VOA11B LCS 06171 VOA11B LCSD 0617 (H18-SS02-01 H18-SS02-02 WDS-SB10-08)	ACETONE METHYLENE CHLORIDE	290 170	255 167	36.00-164.00 70.00-128.00	- -	ACETONE METHYLENE CHLORIDE	J+(all detects)

Method: 8260C-ME-STAR
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS5 0617 (P113-SS02-01)	1,2,4-TRIMETHYLBENZENE	74.8	-	75.00-123.00	-	1,2,4-TRIMETHYLBENZENE	J-(all detects) UJ(all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H18-SS01-01 (Dry)	H18-SS01-01 DUP (Dry)			
CADMIUM	0.033	0.18 U	200	50.00	J (all detects)
LEAD	9.2	2.7	109	50.00	UJ (all non-detects)

Method: 8260C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H18-SS01-01	H18-SS01-01 DUP			
METHYLENE CHLORIDE	0.0036	0.0054 UBYQ	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H18-SS01-01	H18-SS01-01 DUP			
1-METHYLNAPHTHALENE	0.0063	0.012	62	50.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	0.0060	0.014	80	50.00	
BENZO(G,H,I)PERYLENE	0.055	0.0012	191	50.00	
FLUORENE	0.018	0.031	53	50.00	
NAPHTHALENE	0.0053	0.020	116	50.00	

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-SO-061216-02(Initial)	6/12/2016 8:05:00 AM	ACETONE METHYLENE CHLORIDE	0.0095 mg/Kg 0.0012 mg/Kg	H18-SS01-01 H18-SS01-01 DUP H18-SS01-02 H18-SS02-01 H18-SS02-02 H4-SB02-05 H4-SB03-05 H4-SS01-01 H4-SS02-01 H4-SS03-01 H6-SS01-01 H6-SS02-01 H6-SS03-01 P113-SB01-04 P113-SB01-05 P113-SB02-04 P113-SS02-01 P113-SS03-01 WDS-SB10-08

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H18-SS01-01 DUP(Initial)	ACETONE	0.062 mg/Kg	0.062U mg/Kg
H18-SS01-01(Initial)	METHYLENE CHLORIDE	0.0036 mg/Kg	0.0058U mg/Kg
H18-SS01-02(Initial)	ACETONE	0.025 mg/Kg	0.025U mg/Kg
H18-SS02-01(Initial)	ACETONE	0.048 mg/Kg	0.048U mg/Kg
H18-SS02-02(Initial)	ACETONE	0.033 mg/Kg	0.033U mg/Kg
H18-SS02-02(Initial)	METHYLENE CHLORIDE	0.0032 mg/Kg	0.0054U mg/Kg
WDS-SB10-08(Initial)	ACETONE	0.060 mg/Kg	0.060U mg/Kg
WDS-SB10-08(Initial)	METHYLENE CHLORIDE	0.0029 mg/Kg	0.0043U mg/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H18-SS01-01	CADMIUM	J	0.033	0.17	LOQ	mg/Kg	J (all detects)
H18-SS01-01 DUP	LEAD	J	2.7	3.6	LOQ	mg/Kg	J (all detects)
	NICKEL	J	3.2	3.6	LOQ	mg/Kg	
H18-SS01-02	CADMIUM	J	0.031	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.3	3.5	LOQ	mg/Kg	
H18-SS02-01	SILVER	J	0.17	0.70	LOQ	mg/Kg	J (all detects)
H18-SS02-02	ARSENIC	J	1.1	1.4	LOQ	mg/Kg	J (all detects)
	LEAD	J	1.1	3.4	LOQ	mg/Kg	
	NICKEL	J	2.2	3.4	LOQ	mg/Kg	
WDS-SB10-08	ARSENIC	J	1.1	1.5	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.1	3.7	LOQ	mg/Kg	

Method: 6010C-STAR
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H4-SB02-05	LEAD	J	3.2	3.7	LOQ	mg/Kg	J (all detects)
H4-SB03-05	LEAD	J	2.8	3.9	LOQ	mg/Kg	J (all detects)
H6-SS02-01	LEAD	J	3.0	4.2	LOQ	mg/Kg	J (all detects)
H6-SS03-01	LEAD	J	7.5	15	LOQ	mg/Kg	J (all detects)
P113-SB01-05	LEAD	J	3.1	3.8	LOQ	mg/Kg	J (all detects)
P113-SB02-04	LEAD	J	2.2	3.8	LOQ	mg/Kg	J (all detects)

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H18-SS01-01	THALLIUM	J	0.050	0.14	LOQ	mg/Kg	J (all detects)
H18-SS01-01 DUP	THALLIUM	J	0.035	0.14	LOQ	mg/Kg	J (all detects)
H18-SS01-02	THALLIUM	J	0.041	0.14	LOQ	mg/Kg	J (all detects)
H18-SS02-02	THALLIUM	JG	0.041	0.13	LOQ	mg/Kg	J (all detects)
WDS-SB10-08	THALLIUM	J	0.087	0.15	LOQ	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606467

Laboratory: RTILABS

EDD Filename: EDD_1606467_SEDD_2a_v25

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H18-SS01-01	METHYLENE CHLORIDE	JBYQ	0.0036	0.0058	LOQ	mg/Kg	J (all detects)
H18-SS02-02	METHYLENE CHLORIDE	JBQ	0.0032	0.0054	LOQ	mg/Kg	J (all detects)
TB-SO-061216-02	ACETONE	JYBQ	0.0095	0.010	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	JYBQ	0.0012	0.0050	LOQ	mg/Kg	
WDS-SB10-08	METHYLENE CHLORIDE	JBQ	0.0029	0.0043	LOQ	mg/Kg	J (all detects)

Method: 8270D-MOD
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H18-SS01-01	CARBAZOLE	J	0.018	0.17	LOQ	mg/Kg	J (all detects)
H18-SS01-01 DUP	CARBAZOLE	J	0.016	0.17	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606506		
Date(s) of Collection:	June 13 th , 2016		
Number/Type Samples & Analyses:	12 soil samples for a project-specific list of PAHs, PCBs, and metals		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 30 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606506. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- ✓ Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: 034-SB01-02		Collected: 6/13/2016 12:50:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.091	J	0.042	LOD	0.21	LOQ	mg/Kg	J	RI

Sample ID: 034-SS01-01		Collected: 6/13/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.17	J	0.045	LOD	0.22	LOQ	mg/Kg	J	RI
SILVER	0.28	J	0.22	LOD	0.90	LOQ	mg/Kg	J	RI

Sample ID: 034-SS02-01		Collected: 6/13/2016 12:40:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.3	J	0.88	LOD	1.8	LOQ	mg/Kg	J	RI
SILVER	0.20	J	0.22	LOD	0.88	LOQ	mg/Kg	J	RI

Sample ID: 034-SS02-02		Collected: 6/13/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.019	J	0.041	LOD	0.20	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.041	U	0.041	LOD	0.20	LOQ	mg/Kg	UJ	Fd

Sample ID: 034-SS02-02 DUP		Collected: 6/13/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	1.5	J	0.80	LOD	1.6	LOQ	mg/Kg	J	RI
BERYLLIUM	0.040	U	0.040	LOD	0.20	LOQ	mg/Kg	UJ	Fd
CADMIUM	0.029	J	0.040	LOD	0.20	LOQ	mg/Kg	J	RI, Fd

Sample ID: 034-SS03-01		Collected: 6/13/2016 12:20:00 PM			Analysis Type: Dilution-1			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	11000		35	LOD	100	LOQ	mg/Kg	J	Ms, Ms

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C			Matrix: Soil						

Sample ID:034-SS03-01 6/13/2016 12:20:00 Collected: PM Analysis Type: Dilution-2 Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINIUM	8600		140	LOD	350	LOQ	mg/Kg	J	Ms, Ms

Sample ID:034-SS03-01 6/13/2016 12:20:00 Collected: PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	2.7	X	0.70	LOD	1.4	LOQ	mg/Kg	J-	Ms
BARIIUM	16	X	3.5	LOD	7.0	LOQ	mg/Kg	J+	Ms
CADMIUM	0.032	J	0.035	LOD	0.17	LOQ	mg/Kg	J	RI
CALCIUM	660	X	7.0	LOD	35	LOQ	mg/Kg	J+	Ms
CHROMIUM	12	X	0.28	LOD	0.35	LOQ	mg/Kg	J-	Ms
COBALT	2.6	GX	0.17	LOD	0.70	LOQ	mg/Kg	J-	Ms
MAGNESIUM	960	X	3.5	LOD	35	LOQ	mg/Kg	J+	Ms
MANGANESE	140	X	0.17	LOD	0.70	LOQ	mg/Kg	J+	Ms
POTASSIUM	420	X	7.0	LOD	14	LOQ	mg/Kg	J+	Ms
SELENIUM	1.0	UX	1.0	LOD	1.4	LOQ	mg/Kg	UJ	Ms
VANADIUM	19	X	0.70	LOD	1.7	LOQ	mg/Kg	J-	Ms

Sample ID:034-SS03-02 6/13/2016 12:30:00 Collected: PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	1.7	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI
NICKEL	3.4	J	0.71	LOD	3.5	LOQ	mg/Kg	J	RI

Sample ID:034-SS04-01 6/13/2016 12:20:00 Collected: PM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.020	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
CADMIUM	0.031	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	2.7	J	0.71	LOD	3.6	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6010C	Matrix:		Soil						

Sample ID: 034-SS04-02		Collected: 6/13/2016 12:25:00 PM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
LEAD	2.4	J	0.71	LOD	3.6	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS04-02 DUP		Collected: 6/13/2016 12:25:00 PM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
LEAD	2.2	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS05-01		Collected: 6/13/2016 12:10:00 PM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.73	J	0.45	LOD	0.90	LOQ	mg/Kg	J	RI	
ARSENIC	0.85	J	0.90	LOD	1.8	LOQ	mg/Kg	J	RI	
CADMIUM	0.10	J	0.045	LOD	0.22	LOQ	mg/Kg	J	RI	
COBALT	0.87	J	0.22	LOD	0.90	LOQ	mg/Kg	J	RI	
NICKEL	3.8	J	0.90	LOD	4.5	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS05-02		Collected: 6/13/2016 12:10:00 PM			Analysis Type: Initial			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
LEAD	3.9	J	0.79	LOD	4.0	LOQ	mg/Kg	J	RI	

Method Category:	METALS									
Method:	6020A-TL	Matrix:		Soil						

Sample ID: 034-SB01-02		Collected: 6/13/2016 12:50:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.058	J	0.044	LOD	0.18	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS01-01		Collected: 6/13/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.086	JG	0.047	LOD	0.19	LOQ	mg/Kg	J	RI	

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL			Matrix: Soil						

Sample ID: 034-SS02-01		Collected: 6/13/2016 12:40:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.095	J	0.046	LOD	0.18	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS02-02		Collected: 6/13/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.068	J	0.040	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS02-02 DUP		Collected: 6/13/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.090	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS03-01		Collected: 6/13/2016 12:20:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.10	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS03-02		Collected: 6/13/2016 12:30:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.035	J	0.034	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS04-02		Collected: 6/13/2016 12:25:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.10	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS04-02 DUP		Collected: 6/13/2016 12:25:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.086	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A-TL	Matrix:	Soil						

Sample ID: 034-SS05-01	Collected: 6/13/2016 12:10:00 PM			Analysis Type: Initial				Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.046	J	0.045	LOD	0.18	LOQ	mg/Kg	J	RI	

Sample ID: 034-SS05-02	Collected: 6/13/2016 12:10:00 PM			Analysis Type: Initial				Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.067	J	0.040	LOD	0.16	LOQ	mg/Kg	J	RI	

Method Category:	SVOA								
Method:	8270D SIM	Matrix:	Soil						

Sample ID: 034-SS02-01	Collected: 6/13/2016 12:40:00 PM			Analysis Type: Dilution-1-BASE/ NEUTRAL				Dilution: 20		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTHRACENE	0.12	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
BENZ(A)ANTHRACENE	0.57	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
BENZO(A)PYRENE	0.45	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
BENZO(B)FLUORANTHENE	0.64	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
BENZO(K)FLUORANTHENE	0.23	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
CHRYSENE	0.44	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
DIBENZO(A,H)ANTHRACENE	0.024	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
INDENO(1,2,3-CD)PYRENE	0.27	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
PHENANTHRENE	0.48	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	
PYRENE	0.90	H	0.019	LOD	0.019	LOQ	mg/Kg	J-	EtoA	

Sample ID: 034-SS02-01	Collected: 6/13/2016 12:40:00 PM			Analysis Type: Dilution-2-BASE/ NEUTRAL				Dilution: 200		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
FLUORANTHENE	1.1	H	0.19	LOD	0.19	LOQ	mg/Kg	J-	EtoA	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Soil

Sample ID: 034-SS02-02	Collected: 6/13/2016 12:45:00 PM		Analysis Type: Dilution-1-BASE/ NEUTRAL				Dilution: 3		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.054	H	0.0025	LOD	0.0025	LOQ	mg/Kg	J	EtoA, Fd
FLUORANTHENE	0.072	H	0.0025	LOD	0.0025	LOQ	mg/Kg	J	EtoA, Fd
PYRENE	0.060	H	0.0025	LOD	0.0025	LOQ	mg/Kg	J	EtoA, Fd

Sample ID: 034-SS02-02	Collected: 6/13/2016 12:45:00 PM		Analysis Type: Initial-BASE/ NEUTRAL				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.0011		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
ACENAPHTHENE	0.0015		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
ACENAPHTHYLENE	0.0012		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.0038		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.031	Y	0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.024		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.012		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.011		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
CHRYSENE	0.019		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
DIBENZO(A,H)ANTHRACENE	0.0046		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
FLUORENE	0.0016		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.010		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
NAPHTHALENE	0.0011		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.023		0.00084	LOD	0.00084	LOQ	mg/Kg	J	Fd

Sample ID: 034-SS02-02 DUP	Collected: 6/13/2016 12:45:00 PM		Analysis Type: Initial-BASE/ NEUTRAL				Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.00081	U	0.00081	LOD	0.00081	LOQ	mg/Kg	UJ	Fd
ACENAPHTHENE	0.00081	U	0.00081	LOD	0.00081	LOQ	mg/Kg	UJ	Fd
ACENAPHTHYLENE	0.00081	U	0.00081	LOD	0.00081	LOQ	mg/Kg	UJ	Fd
ANTHRACENE	0.00081	U	0.00081	LOD	0.00081	LOQ	mg/Kg	UJ	Fd
BENZ(A)ANTHRACENE	0.0073	Y	0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.0061		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.012		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID:034-SS02-02 DUP		6/13/2016 12:45:00		Initial-BASE/				Dilution: 1	
		Collected: PM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	0.0030		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.0023		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
CHRYSENE	0.0043		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
DIBENZO(A,H)ANTHRACENE	0.00090		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.0098		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
FLUORENE	0.00081	U	0.00081	LOD	0.00081	LOQ	mg/Kg	UJ	Fd
INDENO(1,2,3-CD)PYRENE	0.0025		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
NAPHTHALENE	0.00081	U	0.00081	LOD	0.00081	LOQ	mg/Kg	UJ	Fd
PHENANTHRENE	0.0049		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd
PYRENE	0.0099		0.00081	LOD	0.00081	LOQ	mg/Kg	J	Fd

Sample ID:034-SS03-01		6/13/2016 12:20:00		Dilution-1-BASE/				Dilution: 3	
		Collected: PM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZ(A)ANTHRACENE	0.058		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Ms
BENZO(B)FLUORANTHENE	0.076		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	Ms
BENZO(K)FLUORANTHENE	0.025		0.0022	LOD	0.0022	LOQ	mg/Kg	J-	Ms
FLUORANTHENE	0.13	J	0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Ms
PHENANTHRENE	0.052		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Ms
PYRENE	0.10		0.0022	LOD	0.0022	LOQ	mg/Kg	J+	Ms

Sample ID:034-SS04-02		6/13/2016 12:25:00		Initial-BASE/				Dilution: 1	
		Collected: PM		Analysis Type: NEUTRAL					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.0013		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.0071	Y	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.0038		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.0077		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.0019		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
CHRYSENE	0.0035		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.0091		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.0016		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Soil

Sample ID: 034-SS04-02	Collected: 6/13/2016 12:25:00 PM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	0.0051		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
PYRENE	0.0089		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd

Sample ID: 034-SS04-02 DUP	Collected: 6/13/2016 12:25:00 PM	Analysis Type: Initial-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	Fd
BENZ(A)ANTHRACENE	0.0011	Y	0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	Fd
BENZO(B)FLUORANTHENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	Fd
BENZO(G,H,I)PERYLENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	Fd
CHRYSENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	Fd
FLUORANTHENE	0.0017		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.00072	U	0.00072	LOD	0.00072	LOQ	mg/Kg	UJ	Fd
PHENANTHRENE	0.0015		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd
PYRENE	0.0016		0.00072	LOD	0.00072	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
EtoA	Extraction to Analysis Estimation
Fd	Field Duplicate Precision
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value

* denotes a non-reportable result

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Data Review Summary

Lab Reporting Batch ID: 1606506

EDD Filename: EDD_1606506_SEDD_2a_v4

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606506
EDD Filename: EDD_1606506_SEDD_2a_v4

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D SIM Preparation Method: 3550B
Matrix: Soil

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
034-SS02-01 (Dilution-1)	Extraction To Analysis	42.00	40.00	DAYS	J- (all detects)
034-SS02-01 (Dilution-2)		42.00	40.00	DAYS	UJ (all non-detects)
034-SS02-02 (Dilution-1)		42.00	40.00	DAYS	

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	034-SS02-02 (Dry)	034-SS02-02 DUP (Dry)			
BERYLLIUM	0.019	0.20 U	200	50.00	J (all detects) UJ (all non-detects)
CADMIUM	0.20 U	0.029	200	50.00	

Method: 8270D SIM
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	034-SS04-02	034-SS04-02 DUP			
ANTHRACENE	0.0013	0.00072 U	200	50.00	J(all detects) UJ(all non-detects)
BENZ(A)ANTHRACENE	0.0071	0.0011	146	50.00	
BENZO(A)PYRENE	0.0038	0.00072 U	200	50.00	
BENZO(B)FLUORANTHENE	0.0077	0.00072 U	200	50.00	
BENZO(G,H,I)PERYLENE	0.0019	0.00072 U	200	50.00	
CHRYSENE	0.0035	0.00072 U	200	50.00	
FLUORANTHENE	0.0091	0.0017	137	50.00	
INDENO(1,2,3-CD)PYRENE	0.0016	0.00072 U	200	50.00	
PHENANTHRENE	0.0051	0.0015	109	50.00	
PYRENE	0.0089	0.0016	139	50.00	

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	034-SS02-02	034-SS02-02 DUP			
2-METHYLNAPHTHALENE	0.0011	0.00081 U	200	50.00	J(all detects) UJ(all non-detects)
ACENAPHTHENE	0.0015	0.00081 U	200	50.00	
ACENAPHTHYLENE	0.0012	0.00081 U	200	50.00	
ANTHRACENE	0.0038	0.00081 U	200	50.00	
BENZ(A)ANTHRACENE	0.031	0.0073	124	50.00	
BENZO(A)PYRENE	0.024	0.0061	119	50.00	
BENZO(B)FLUORANTHENE	0.054	0.012	127	50.00	
BENZO(G,H,I)PERYLENE	0.012	0.0030	120	50.00	
BENZO(K)FLUORANTHENE	0.011	0.0023	131	50.00	
CHRYSENE	0.019	0.0043	126	50.00	
DIBENZO(A,H)ANTHRACENE	0.0046	0.00090	135	50.00	
FLUORANTHENE	0.072	0.0098	152	50.00	
FLUORENE	0.0016	0.00081 U	200	50.00	
INDENO(1,2,3-CD)PYRENE	0.010	0.0025	120	50.00	
NAPHTHALENE	0.0011	0.00081 U	200	50.00	
PHENANTHRENE	0.023	0.0049	130	50.00	
PYRENE	0.060	0.0099	143	50.00	

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606506

Laboratory: RTILABS

EDD Filename: EDD_1606506_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
034-SB01-02	BERYLLIUM	J	0.091	0.21	LOQ	mg/Kg	J (all detects)
034-SS01-01	BERYLLIUM	J	0.17	0.22	LOQ	mg/Kg	J (all detects)
	SILVER	J	0.28	0.90	LOQ	mg/Kg	
034-SS02-01	ARSENIC	J	1.3	1.8	LOQ	mg/Kg	J (all detects)
	SILVER	J	0.20	0.88	LOQ	mg/Kg	
034-SS02-02	BERYLLIUM	J	0.019	0.20	LOQ	mg/Kg	J (all detects)
034-SS02-02 DUP	ARSENIC	J	1.5	1.6	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.029	0.20	LOQ	mg/Kg	
034-SS03-01	CADMIUM	J	0.032	0.17	LOQ	mg/Kg	J (all detects)
034-SS03-02	LEAD	J	1.7	3.5	LOQ	mg/Kg	J (all detects)
	NICKEL	J	3.4	3.5	LOQ	mg/Kg	
034-SS04-01	BERYLLIUM	J	0.020	0.18	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.031	0.18	LOQ	mg/Kg	
	LEAD	J	2.7	3.6	LOQ	mg/Kg	
034-SS04-02	LEAD	J	2.4	3.6	LOQ	mg/Kg	J (all detects)
034-SS04-02 DUP	LEAD	J	2.2	3.5	LOQ	mg/Kg	J (all detects)
034-SS05-01	ANTIMONY	J	0.73	0.90	LOQ	mg/Kg	J (all detects)
	ARSENIC	J	0.85	1.8	LOQ	mg/Kg	
	CADMIUM	J	0.10	0.22	LOQ	mg/Kg	
	COBALT	J	0.87	0.90	LOQ	mg/Kg	
	NICKEL	J	3.8	4.5	LOQ	mg/Kg	
034-SS05-02	LEAD	J	3.9	4.0	LOQ	mg/Kg	J (all detects)

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
034-SB01-02	THALLIUM	J	0.058	0.18	LOQ	mg/Kg	J (all detects)
034-SS01-01	THALLIUM	JG	0.086	0.19	LOQ	mg/Kg	J (all detects)
034-SS02-01	THALLIUM	J	0.095	0.18	LOQ	mg/Kg	J (all detects)
034-SS02-02	THALLIUM	J	0.068	0.16	LOQ	mg/Kg	J (all detects)
034-SS02-02 DUP	THALLIUM	J	0.090	0.16	LOQ	mg/Kg	J (all detects)
034-SS03-01	THALLIUM	J	0.10	0.14	LOQ	mg/Kg	J (all detects)
034-SS03-02	THALLIUM	J	0.035	0.14	LOQ	mg/Kg	J (all detects)
034-SS04-02	THALLIUM	J	0.10	0.14	LOQ	mg/Kg	J (all detects)
034-SS04-02 DUP	THALLIUM	J	0.086	0.14	LOQ	mg/Kg	J (all detects)
034-SS05-01	THALLIUM	J	0.046	0.18	LOQ	mg/Kg	J (all detects)
034-SS05-02	THALLIUM	J	0.067	0.16	LOQ	mg/Kg	J (all detects)

Project Name and Number: - USACE Project: Camp Hero

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Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606525		
Date(s) of Collection:	June 13 th , 2016		
Number/Type Samples & Analyses:	18 soil samples and 1 trip blank for a project-specific list of VOCs and STAR VOCs		
Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 31 st , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606525. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- ✓ Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method Category:	VOA								
Method:	8260C	Matrix:		Soil					

6/13/2016 10:55:00									
Sample ID: H16-SB01-05			Collected: AM		Analysis Type: Initial			Dilution: 0.97	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.014	UQ	0.014	LOD	0.028	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0028	U	0.0028	LOD	0.0071	LOQ	mg/Kg	UJ	Fd
ACETONE	0.070	YQ	0.0028	LOD	0.014	LOQ	mg/Kg	UJ	Lcs, Lcs, Fd, Tb

6/13/2016 10:55:00									
Sample ID: H16-SB01-05 DUP			Collected: AM		Analysis Type: Initial			Dilution: 0.97	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.013	UQ	0.013	LOD	0.027	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.021	YQ	0.0027	LOD	0.013	LOQ	mg/Kg	UJ	Lcs, Lcs, Mb, Fd, Tb
METHYLENE CHLORIDE	0.0086		0.0027	LOD	0.0067	LOQ	mg/Kg	UJ	Fd, Tb

6/13/2016 10:50:00									
Sample ID: H16-SS01-01			Collected: AM		Analysis Type: Initial			Dilution: 1.08	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0026	UQY	0.0026	LOD	0.0065	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.013	UQ	0.013	LOD	0.026	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.24	BYQ	0.0026	LOD	0.013	LOQ	mg/Kg	UJ	Lcs, Lcs, Tb
BROMOFORM	0.00078	UYQ	0.00078	LOD	0.0013	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00078	UYQ	0.00078	LOD	0.0013	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.00078	UQ	0.00078	LOD	0.0013	LOQ	mg/Kg	UJ	Lcs

6/13/2016 8:00:00									
Sample ID: TB-SO-061316-01			Collected: AM		Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.024	YQB	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Mb
BROMOFORM	0.00060	UYQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0084	QB	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs, Mb

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method Category:	VOA									
Method:	8260C			Matrix: Soil						

Sample ID: WDS-SB09-06		Collected: 6/13/2016 1:05:00 PM			Analysis Type: Initial			Dilution: 0.89	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.024	BYQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.00060	UQY	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB11-08		Collected: 6/13/2016 10:40:00 AM			Analysis Type: Initial			Dilution: 0.77	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.029	BYQ	0.0017	LOD	0.0085	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.00051	UQY	0.00051	LOD	0.00085	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00051	UQ	0.00051	LOD	0.00085	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB12-05		Collected: 6/13/2016 8:35:00 AM			Analysis Type: Initial			Dilution: 0.91	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.0070	J	0.010	LOD	0.020	LOQ	mg/Kg	J	RI
ACETONE	0.10	BYQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Tb
BROMOFORM	0.00061	UQY	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00061	UQ	0.00061	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0011	JBQ	0.0020	LOD	0.0051	LOQ	mg/Kg	UJ	Lcs, Mb, Tb

Sample ID: WDS-SB13-05		Collected: 6/13/2016 8:20:00 AM			Analysis Type: Initial			Dilution: 0.99	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.087	BYQ	0.0022	LOD	0.011	LOQ	mg/Kg	UJ	Lcs, Tb
BROMOFORM	0.00067	UQY	0.00067	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00067	UQ	0.00067	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0037	JBQ	0.0022	LOD	0.0056	LOQ	mg/Kg	UJ	Lcs, Mb, Tb

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Data Qualifier Summary

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C-ME	Matrix: Soil

Sample ID: H5-SS01-01		Collected: 6/13/2016 9:50:00 AM		Analysis Type: Initial				Dilution: 188.2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.28	UQ	0.28	LOD	0.47	LOQ	mg/Kg	UJ	Lcs

Sample ID: H5-SS01-02		Collected: 6/13/2016 9:55:00 AM		Analysis Type: Initial				Dilution: 95.4	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.063	UQ	0.063	LOD	0.11	LOQ	mg/Kg	UJ	Lcs

Sample ID: H5-SS02-01		Collected: 6/13/2016 9:15:00 AM		Analysis Type: Initial				Dilution: 188.7	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.83	J	0.92	LOD	2.3	LOQ	mg/Kg	J	RI
BROMOFORM	0.28	UQ	0.28	LOD	0.46	LOQ	mg/Kg	UJ	Lcs

Sample ID: H5-SS02-01 DUP		Collected: 6/13/2016 9:15:00 AM		Analysis Type: Initial				Dilution: 221.6	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.78	J	1.1	LOD	2.7	LOQ	mg/Kg	J	RI
BROMOFORM	0.33	UQ	0.33	LOD	0.55	LOQ	mg/Kg	UJ	Lcs

Sample ID: H5-SS02-02		Collected: 6/13/2016 9:20:00 AM		Analysis Type: Initial				Dilution: 175.7	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.17	UQ	0.17	LOD	0.29	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB08-05		Collected: 6/13/2016 1:20:00 PM		Analysis Type: Initial				Dilution: 96.4	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.065	UQ	0.065	LOD	0.11	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C-STAR	Matrix: Soil

Sample ID: MP-SB02-11		Collected: AM		6/13/2016 11:30:00		Analysis Type: Initial		Dilution: 0.95	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.00062	UQ	0.00062	LOD	0.0052	LOQ	mg/Kg	UJ	Lcs

Sample ID: MP-SS03-01		Collected: AM		6/13/2016 11:15:00		Analysis Type: Initial		Dilution: 1.31	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.00095	UQ	0.00095	LOD	0.0079	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606525

EDD Filename: EDD_1606525_SEDD_2a_v19

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0617	6/17/2016 7:48:00 AM	ACETONE METHYLENE CHLORIDE	0.0078 mg/Kg 0.0042 mg/Kg	TB-SO-061316-01 WDS-SB09-06 WDS-SB11-08 WDS-SB12-05 WDS-SB13-05
VOA11B MBLK 0618	6/18/2016 11:50:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	0.015 mg/Kg 0.0045 mg/Kg 0.00058 mg/Kg	H16-SS01-01
VOA11B MBLK 0621	6/21/2016 10:00:00 AM	ACETONE	0.0049 mg/Kg	H16-SB01-05 H16-SB01-05 DUP

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H16-SB01-05 DUP(Initial)	ACETONE	0.021 mg/Kg	0.021U mg/Kg
TB-SO-061316-01(Initial)	ACETONE	0.024 mg/Kg	0.024U mg/Kg
TB-SO-061316-01(Initial)	METHYLENE CHLORIDE	0.0084 mg/Kg	0.0084U mg/Kg
WDS-SB09-06(Initial)	ACETONE	0.024 mg/Kg	0.024U mg/Kg
WDS-SB11-08(Initial)	ACETONE	0.029 mg/Kg	0.029U mg/Kg
WDS-SB12-05(Initial)	METHYLENE CHLORIDE	0.0011 mg/Kg	0.0051U mg/Kg
WDS-SB13-05(Initial)	METHYLENE CHLORIDE	0.0037 mg/Kg	0.0056U mg/Kg

Method: 8260C-STAR
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK5 0618	6/18/2016 11:50:00 PM	TOLUENE	0.00058 mg/Kg	MP-SB02-11 MP-SS03-01

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06171 VOA11B LCSD 0617 (TB-SO-061316-01 WDS-SB09-06 WDS-SB11-08 WDS-SB12-05 WDS-SB13-05)	BROMOFORM CHLORODIBROMOMETHANE	65.5 -	58.3 70	67.00-132.00 74.00-126.00	- -	BROMOFORM CHLORODIBROMOMETHANE	J- (all detects) UJ (all non-detects)
VOA11B LCS 06171 VOA11B LCSD 0617 (TB-SO-061316-01 WDS-SB09-06 WDS-SB11-08 WDS-SB12-05 WDS-SB13-05)	ACETONE METHYLENE CHLORIDE	290 170	255 167	36.00-164.00 70.00-128.00	- -	ACETONE METHYLENE CHLORIDE	J+(all detects)
VOA11B LCS 06181 VOA11B LCSD 0618 (H16-SS01-01)	2-Butanone [MEK] ACETONE	- 355	213 244	51.00-148.00 36.00-164.00	46.01 (25.00) 37.22 (25.00)	2-Butanone [MEK] ACETONE	J(all detects) UJ(all non-detects)
VOA11B LCS 06181 VOA11B LCSD 0618 (H16-SS01-01)	1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE	59 54.8 66.8 -	- 52.1 65.8 73.9	61.00-132.00 67.00-132.00 74.00-126.00 74.00-126.00	- - - -	1,2-DIBROMO-3-CHLOROPROPA BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE	J-(all detects) UJ(all non-detects)
VOA11B LCSD 0618 (H16-SS01-01)	METHYLENE CHLORIDE	-	145	70.00-128.00	-	METHYLENE CHLORIDE	J+(all detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06201 (H5-SS01-01 H5-SS01-02 H5-SS02-01 H5-SS02-01 DUP H5-SS02-02 WDS-SB08-05)	BROMOFORM	65.5	-	67.00-132.00	-	BROMOFORM	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06211 VOA11B LCSD 0621 (H16-SB01-05 H16-SB01-05 DUP)	2-Butanone [MEK] ACETONE	160 247	- 178	51.00-148.00 36.00-164.00	36.29 (25.00) 32.19 (25.00)	2-Butanone [MEK] ACETONE	J(all detects) UJ(all non-detects)

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method: 8260C-STAR

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
VOA11B LCSD5 0618 (MP-SB02-11 MP-SS03-01)	NAPHTHALENE	-	61.7	62.00-129.00	-	NAPHTHALENE	J-(all detects) UJ(all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	H16-SB01-05	H16-SB01-05 DUP			
ACETONE	0.070	0.021	108	50.00	J (all detects)
METHYLENE CHLORIDE	0.0071 U	0.0086	200	50.00	UJ (all non-detects)

Trip Blank Outlier Report

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-SO-061316-01(Initial)	6/13/2016 8:00:00 AM	ACETONE METHYLENE CHLORIDE	0.024 mg/Kg 0.0084 mg/Kg	H16-SB01-05 H16-SB01-05 DUP H16-SS01-01 H5-SS01-01 H5-SS01-02 H5-SS02-01 H5-SS02-01 DUP H5-SS02-02 MP-SB02-11 MP-SB03-09 MP-SS02-01 MP-SS02-01 DUP MP-SS03-01 WDS-SB08-05 WDS-SB09-06 WDS-SB11-08 WDS-SB12-05 WDS-SB13-05

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H16-SB01-05 DUP(Initial)	ACETONE	0.021 mg/Kg	0.021U mg/Kg
H16-SB01-05 DUP(Initial)	METHYLENE CHLORIDE	0.0086 mg/Kg	0.0086U mg/Kg
H16-SB01-05(Initial)	ACETONE	0.070 mg/Kg	0.070U mg/Kg
H16-SS01-01(Initial)	ACETONE	0.24 mg/Kg	0.24U mg/Kg
WDS-SB09-06(Initial)	ACETONE	0.024 mg/Kg	0.024U mg/Kg
WDS-SB11-08(Initial)	ACETONE	0.029 mg/Kg	0.029U mg/Kg
WDS-SB12-05(Initial)	ACETONE	0.10 mg/Kg	0.10U mg/Kg
WDS-SB12-05(Initial)	METHYLENE CHLORIDE	0.0011 mg/Kg	0.0051U mg/Kg
WDS-SB13-05(Initial)	ACETONE	0.087 mg/Kg	0.087U mg/Kg
WDS-SB13-05(Initial)	METHYLENE CHLORIDE	0.0037 mg/Kg	0.0056U mg/Kg

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606525

Laboratory: RTILABS

EDD Filename: EDD_1606525_SEDD_2a_v19

eQAPP Name: Former_Camp_Hero

Method: 8260C

Matrix: Soil

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
WDS-SB12-05	2-Butanone [MEK]	J	0.0070	0.020	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	JBQ	0.0011	0.0051	LOQ	mg/Kg	
WDS-SB13-05	METHYLENE CHLORIDE	JBQ	0.0037	0.0056	LOQ	mg/Kg	J (all detects)

Method: 8260C-ME

Matrix: Soil

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
H5-SS02-01	ACETONE	J	0.83	2.3	LOQ	mg/Kg	J (all detects)
H5-SS02-01 DUP	ACETONE	J	0.78	2.7	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606529		
Date(s) of Collection:	June 14 th , 2016		
Number/Type Samples & Analyses:	4 groundwater samples and one trip blank sample for a project-specific list of VOCs and SVOCs		
Senior Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 31 st , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606529. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR, Data quality requirements can be found in the Final 2016

Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

Sample AST35-SB04-GW was analyzed twice for SVOCs. The initial run had 3 surrogates that exceeded the control limit. The lab re-ran the sample but it was outside hold time. The initial results were used.

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR. ADR Discrepancy reports are included in Attachment B.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM
Matrix: Water

Sample ID: AST35-SB03-GW	Collected: 6/14/2016 10:55:00 AM	Analysis Type: NEUTRAL	Dilution-1/TOT-BASE/	Dilution: 50					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	4.7		0.96	LOD	0.96	LOQ	ug/L	J	Fd
BENZ(A)ANTHRACENE	1.1		0.96	LOD	0.96	LOQ	ug/L	J	Fd
FLUORANTHENE	3.1		0.96	LOD	0.96	LOQ	ug/L	J	Fd
FLUORENE	23		0.96	LOD	0.96	LOQ	ug/L	J	Fd
PYRENE	3.7		0.96	LOD	0.96	LOQ	ug/L	J	Fd

Sample ID: AST35-SB03-GW	Collected: 6/14/2016 10:55:00 AM	Analysis Type: NEUTRAL	Dilution-2/TOT-BASE/	Dilution: 200					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	140		3.8	LOD	3.8	LOQ	ug/L	J	Fd
ACENAPHTHENE	21		3.8	LOD	3.8	LOQ	ug/L	J	Fd
ANTHRACENE	12		3.8	LOD	3.8	LOQ	ug/L	J	Fd
NAPHTHALENE	53		3.8	LOD	3.8	LOQ	ug/L	J	Fd
PHENANTHRENE	56		3.8	LOD	3.8	LOQ	ug/L	J	Fd

Sample ID: AST35-SB03-GW	Collected: 6/14/2016 10:55:00 AM	Analysis Type: NEUTRAL	Initial/TOT-BASE/	Dilution: 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Fd
BENZO(A)PYRENE	0.44		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
BENZO(B)FLUORANTHENE	0.78		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
BENZO(G,H,I)PERYLENE	0.17		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
BENZO(K)FLUORANTHENE	0.23		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
CHRYSENE	0.72		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
DIBENZO(A,H)ANTHRACENE	0.089		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd
INDENO(1,2,3-CD)PYRENE	0.17		0.019	LOD	0.019	LOQ	ug/L	J	Surr, Fd

Sample ID: AST35-SB03-GW DUP	Collected: 6/14/2016 10:55:00 AM	Analysis Type: NEUTRAL	Dilution-1/TOT-BASE/	Dilution: 50					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	48		1.1	LOD	1.1	LOQ	ug/L	J	Fd
2-METHYLNAPHTHALENE	38		1.1	LOD	1.1	LOQ	ug/L	J	Fd

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Water

Sample ID: AST35-SB03-GW DUP	Collected: 6/14/2016 10:55:00 AM	Analysis Type: Dilution-1/TOT-BASE/ NEUTRAL	Dilution: 50						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	3.2		1.1	LOD	1.1	LOQ	ug/L	J	Fd
FLUORENE	2.6		1.1	LOD	1.1	LOQ	ug/L	J	Fd
NAPHTHALENE	34		1.1	LOD	1.1	LOQ	ug/L	J	Fd
PHENANTHRENE	5.0		1.1	LOD	1.1	LOQ	ug/L	J	Fd

Sample ID: AST35-SB03-GW DUP	Collected: 6/14/2016 10:55:00 AM	Analysis Type: Initial/TOT-BASE/ NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	0.40		0.023	LOD	0.023	LOQ	ug/L	J	Fd
ANTHRACENE	0.44		0.023	LOD	0.023	LOQ	ug/L	J	Fd
BENZ(A)ANTHRACENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
BENZO(A)PYRENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
BENZO(B)FLUORANTHENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
BENZO(G,H,I)PERYLENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
BENZO(K)FLUORANTHENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
CHRYSENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
DIBENZO(A,H)ANTHRACENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
FLUORANTHENE	0.062		0.023	LOD	0.023	LOQ	ug/L	J	Fd
INDENO(1,2,3-CD)PYRENE	0.023	U	0.023	LOD	0.023	LOQ	ug/L	UJ	Fd
PYRENE	0.10		0.023	LOD	0.023	LOQ	ug/L	J	Fd

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Sample ID: AST35-SB02-GW	Collected: 6/14/2016 10:05:00 AM	Analysis Type: Initial/TOT-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: AST35-SB02-GW		6/14/2016 10:05:00 Collected: AM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UYZ	2.4	LOD	4.7	LOQ	ug/L	UJ	Lcs
N-NITROSODIMETHYLAMINE	0.94	UYQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB03-GW		6/14/2016 10:55:00 Collected: AM			Initial/TOT-ACID Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.94	UQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB03-GW		6/14/2016 10:55:00 Collected: AM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UYZ	2.4	LOD	4.7	LOQ	ug/L	UJ	Lcs
CARBAZOLE	1.6	J	0.94	LOD	4.7	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.94	UYQ	0.94	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB03-GW DUP		6/14/2016 10:55:00 Collected: AM			Initial/TOT-ACID Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.95	UQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB03-GW DUP		6/14/2016 10:55:00 Collected: AM			Initial/TOT-BASE/ Analysis Type: NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UYZ	2.4	LOD	4.8	LOQ	ug/L	UJ	Lcs
CARBAZOLE	1.8	J	0.95	LOD	4.8	LOQ	ug/L	J	RI
N-NITROSODIMETHYLAMINE	0.95	UYQ	0.95	LOD	4.8	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: AST35-SB04-GW Collected: 6/14/2016 12:00:00 PM Analysis Type: Initial/TOT-ACID Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	2.4	UQ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	2.4	UYQZ	2.4	LOD	24	LOQ	ug/L	UJ	Lcs, Lcs
PHENOL	0.97	UQ	0.97	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB04-GW Collected: 6/14/2016 12:00:00 PM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	2.4	U	2.4	LOD	4.9	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	2.4	U	2.4	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.97	U	0.97	LOD	9.7	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
4-NITROANILINE	2.4	U	2.4	LOD	9.7	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	2.4	U	2.4	LOD	24	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	2.4	U	2.4	LOD	4.9	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	2.4	U	2.4	LOD	4.9	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	2.4	UYZ	2.4	LOD	4.9	LOQ	ug/L	UJ	Lcs, Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	2.4	U	2.4	LOD	4.9	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.97	U	0.97	LOD	3.9	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	2.4	U	2.4	LOD	4.9	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Water

Sample ID: AST35-SB04-GW		Collected: 6/14/2016 12:00:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXACHLORO BENZENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
HEXACHLORO BUTADIENE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
HEXACHLORO ETHANE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr
NITRO BENZENE	2.4	U	2.4	LOD	2.9	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.97	UYQ	0.97	LOD	4.9	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	2.4	U	2.4	LOD	4.9	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.97	U	0.97	LOD	4.9	LOQ	ug/L	UJ	Surr

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID: AST35-SB02-GW		Collected: 6/14/2016 10:05:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
ACETONE	4.2	JY	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	1.0		0.60	LOD	1.0	LOQ	ug/L	U	Mb, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.37	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID: AST35-SB03-GW		Collected: 6/14/2016 10:55:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ACETONE	3.8	JY	0.60	LOD	10	LOQ	ug/L	U	Tb
BROMODICHLOROMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA								
Method:	8260C	Matrix:		Water					

Sample ID: AST35-SB03-GW		Collected: 6/14/2016 10:55:00 AM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	0.68	JYBQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs, Mb, Fd, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	2.8		0.60	LOD	1.0	LOQ	ug/L	J	Fd
METHYLENE CHLORIDE	0.41	J	0.60	LOD	5.0	LOQ	ug/L	UJ	Mb, Fd, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Trichlorofluoromethane [Freon-11]	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs, Fd

Sample ID: AST35-SB03-GW DUP		Collected: 6/14/2016 10:55:00 AM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.3	J	0.60	LOD	10	LOQ	ug/L	U	Tb
CHLOROMETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	UJ	Fd
ETHYLBENZENE	7.2		0.60	LOD	1.0	LOQ	ug/L	J	Fd
METHYLENE CHLORIDE	0.60	U	0.60	LOD	5.0	LOQ	ug/L	UJ	Fd
Xylene (Total)	2.5	J	1.8	LOD	3.0	LOQ	ug/L	J	RI, Fd

Sample ID: AST35-SB04-GW		Collected: 6/14/2016 12:00:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ACETONE	2.0	JY	0.60	LOD	10	LOQ	ug/L	U	Tb
BROMODICHLOROMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	0.72	JYBQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs, Mb, Tb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.40	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb, Tb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Trichlorofluoromethane [Freon-11]	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: AST35-SB04-GW		Collected: 6/14/2016 12:00:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID: TB-GW-061416-02		Collected: 6/14/2016 8:15:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-HEXANONE	1.0	UYQ	1.0	LOD	2.0	LOQ	ug/L	UJ	Lcs
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ETHYLBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.66	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value
StoE	Sampling to Extraction Estimation
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606529

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606529
EDD Filename: EDD_1606529_SEDD_2a_v10_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD Preparation Method: 3510C
Matrix: Water

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
AST35-SB04-GW (Reanalysis-1/TO1	Sampling To Extraction	13.00	7.00	DAYS	J- (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0626	6/26/2016 4:52:00 PM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	1.9 ug/L 0.43 ug/L 0.66 ug/L	AST35-SB02-GW TB-GW-061416-02
VOA11B MBLK2 062	6/27/2016 3:17:00 AM	CHLOROMETHANE METHYLENE CHLORIDE	0.73 ug/L 0.56 ug/L	AST35-SB03-GW AST35-SB04-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
AST35-SB02-GW(Initial/TOT)	ACETONE	4.2 ug/L	10U ug/L
AST35-SB02-GW(Initial/TOT)	CHLOROMETHANE	1.0 ug/L	1.0U ug/L
AST35-SB02-GW(Initial/TOT)	METHYLENE CHLORIDE	0.37 ug/L	5.0U ug/L
AST35-SB03-GW(Initial/TOT)	CHLOROMETHANE	0.68 ug/L	1.0U ug/L
AST35-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.41 ug/L	5.0U ug/L
AST35-SB04-GW(Initial/TOT)	CHLOROMETHANE	0.72 ug/L	1.0U ug/L
AST35-SB04-GW(Initial/TOT)	METHYLENE CHLORIDE	0.40 ug/L	5.0U ug/L
TB-GW-061416-02(Initial/TOT)	METHYLENE CHLORIDE	0.66 ug/L	5.0U ug/L

Surrogate Outlier Report

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
AST35-SB02-GW (Initial/TOT)	TOLUENE-D8	88	89.00-112.00	No Affected Compounds	
AST35-SB03-GW (Initial/TOT)	TOLUENE-D8	87.3	89.00-112.00	No Affected Compounds	
AST35-SB04-GW (Initial/TOT)	TOLUENE-D8	87.4	89.00-112.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
AST35-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5	468 650	44.00-119.00 44.00-120.00	All Base/Neutral Target Analytes	J+(all detects)

Method: 8270D-MOD
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
AST35-SB02-GW (Initial/TOT)	PHENOL-D5	21.3	30.00-130.00	No Affected Compounds	
AST35-SB03-GW DUP (Initial/TOT)	PHENOL-D5	20.8	30.00-130.00	No Affected Compounds	
AST35-SB03-GW (Initial/TOT)	PHENOL-D5	24.4	30.00-130.00	No Affected Compounds	
AST35-SB04-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5	43.7 39.2 20.9	44.00-119.00 44.00-120.00 30.00-130.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
AST35-SB04-GW (Reanalysis-1/TOT)	PHENOL-D5	27	30.00-130.00	No Affected Compounds	

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-1-40190 LCS-40190 LCSD-1-40190 LCSD-40190 (AST35-SB02-GW AST35-SB03-GW AST35-SB03-GW DUP AST35-SB04-GW)	BENZOIC ACID	42.6	-	50.00-130.00	61.18 (25.00)	BENZOIC ACID	J (all detects) UJ (all non-detects)
LCS-1-40190 LCS-40190 LCSD-1-40190 LCSD-40190 (AST35-SB02-GW AST35-SB03-GW AST35-SB03-GW DUP AST35-SB04-GW)	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETHE N-NITROSODIMETHYLAMINE PHENOL	46.9 49.5 30.1 31.8	46.6 - 35.3 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BIS(2-CHLOROISOPROPYL)ETH N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)
LCS-40262 (AST35-SB04-GW)	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	48.8 39.6 31.2	- - -	50.00-130.00 50.00-130.00 34.00-121.00	- - -	BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06261 VOA11B LCSD 0626 (AST35-SB02-GW TB-GW-061416-02)	2-HEXANONE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE ETHYLBENZENE STYRENE Xylene (Total)	- 63.1 66.5 67.7 - - -	55.6 61.9 64.8 64 78.1 71.1 75.3	57.00-139.00 66.00-130.00 74.00-126.00 75.00-124.00 79.00-121.00 78.00-123.00 79.00-121.00	- - - - - - -	2-HEXANONE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE ETHYLBENZENE STYRENE Xylene (Total)	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0626 VOA11B LCSD2 062 (AST35-SB03-GW AST35-SB04-GW)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE Trichlorofluoromethane [Freon-11] Xylene (Total)	- 78.8 58.4 65.2 67.8 - - -	73.1 77.2 55.1 62.5 64.5 74.9 62.6 78.2	78.00-124.00 79.00-125.00 66.00-130.00 74.00-126.00 75.00-124.00 78.00-123.00 65.00-141.00 79.00-121.00	- - - - - - - -	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE Trichlorofluoromethane [Freon-11] Xylene (Total)	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0626 VOA11B LCSD2 062 (AST35-SB03-GW AST35-SB04-GW)	CHLOROMETHANE	151	142	50.00-139.00	-	CHLOROMETHANE	J+(all detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	AST35-SB03-GW	AST35-SB03-GW DUP			
CHLOROMETHANE	0.68	1.0 U	200	30.00	J (all detects) UJ (all non-detects)
ETHYLBENZENE	2.8	7.2	88	30.00	
METHYLENE CHLORIDE	0.41	5.0 U	200	30.00	
Xylene (Total)	3.0 UQ	2.5	200	30.00	

Method: 8270D SIM
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	AST35-SB03-GW	AST35-SB03-GW DUP			
1-METHYLNAPHTHALENE	140	48	98	30.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	0.019 U	38	200	30.00	
ACENAPHTHENE	21	3.2	147	30.00	
ACENAPHTHYLENE	4.7	0.40	169	30.00	
ANTHRACENE	12	0.44	186	30.00	
BENZ(A)ANTHRACENE	1.1	0.023 U	200	30.00	
BENZO(A)PYRENE	0.44	0.023 U	200	30.00	
BENZO(B)FLUORANTHENE	0.78	0.023 U	200	30.00	
BENZO(G,H,I)PERYLENE	0.17	0.023 U	200	30.00	
BENZO(K)FLUORANTHENE	0.23	0.023 U	200	30.00	
CHRYSENE	0.72	0.023 U	200	30.00	
DIBENZO(A,H)ANTHRACENE	0.089	0.023 U	200	30.00	
FLUORANTHENE	3.1	0.062	192	30.00	
FLUORENE	23	2.6	159	30.00	
INDENO(1,2,3-CD)PYRENE	0.17	0.023 U	200	30.00	
NAPHTHALENE	53	34	44	30.00	
PHENANTHRENE	56	5.0	167	30.00	
PYRENE	3.7	0.10	189	30.00	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Trip Blank Outlier Report

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-061416-02(Initial/TOT)	6/14/2016 8:15:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	44 ug/L 2.5 ug/L 0.66 ug/L	AST35-SB02-GW AST35-SB03-GW AST35-SB03-GW DUP AST35-SB04-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
AST35-SB02-GW(Initial/TOT)	ACETONE	4.2 ug/L	10U ug/L
AST35-SB02-GW(Initial/TOT)	CHLOROMETHANE	1.0 ug/L	1.0U ug/L
AST35-SB02-GW(Initial/TOT)	METHYLENE CHLORIDE	0.37 ug/L	5.0U ug/L
AST35-SB03-GW DUP(Initial/TOT)	ACETONE	3.3 ug/L	10U ug/L
AST35-SB03-GW(Initial/TOT)	ACETONE	3.8 ug/L	10U ug/L
AST35-SB03-GW(Initial/TOT)	CHLOROMETHANE	0.68 ug/L	1.0U ug/L
AST35-SB03-GW(Initial/TOT)	METHYLENE CHLORIDE	0.41 ug/L	5.0U ug/L
AST35-SB04-GW(Initial/TOT)	ACETONE	2.0 ug/L	10U ug/L
AST35-SB04-GW(Initial/TOT)	CHLOROMETHANE	0.72 ug/L	1.0U ug/L
AST35-SB04-GW(Initial/TOT)	METHYLENE CHLORIDE	0.40 ug/L	5.0U ug/L

Reporting Limit Outliers

Lab Reporting Batch ID: 1606529

Laboratory: RTILABS

EDD Filename: EDD_1606529_SEDD_2a_v10_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
AST35-SB02-GW	ACETONE	JY	4.2	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.37	5.0	LOQ	ug/L	
AST35-SB03-GW	ACETONE	JY	3.8	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JYBQ	0.68	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.41	5.0	LOQ	ug/L	
AST35-SB03-GW DUP	ACETONE	J	3.3	10	LOQ	ug/L	J (all detects)
	Xylene (Total)	J	2.5	3.0	LOQ	ug/L	
AST35-SB04-GW	ACETONE	JY	2.0	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JYBQ	0.72	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.40	5.0	LOQ	ug/L	
TB-GW-061416-02	METHYLENE CHLORIDE	J	0.66	5.0	LOQ	ug/L	J (all detects)

Method: 8270D-MOD
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
AST35-SB03-GW	CARBAZOLE	J	1.6	4.7	LOQ	ug/L	J (all detects)
AST35-SB03-GW DUP	CARBAZOLE	J	1.8	4.8	LOQ	ug/L	J (all detects)
AST35-SB04-GW	BENZOIC ACID	JYQH	9.6	24	LOQ	ug/L	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606585		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	20 soil samples and 1 trip blank for a project-specific list of VOCs, SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 26 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606585. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- ✓ Field rinsate blank data
- ✓ Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✗ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

H2-SS02-02 acetone result was over calibration in the low level VOC analyses. The sample was re-run using methanol preserved vials. Results were taken from the low level.

Samples STB-SB03-06, STB-SB04-06DUP, STB-SS05-01, STB-SS06-01, STB-SS07-01, H1-SS01-01, H1-SS01-02, H1-SS02-02, H2-SS01-01, H2-SS01-02, and H2-SS02-01 were initially analyzed twice for the low level VOCs. Responses for internal standards exceeded method specified criteria. Sample re-analyses were performed using the methanol preserved vials.

The following table defines the data qualifiers assigned by ADR and/or during manual data review of the ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Soil

Sample ID: H2-SS02-02 Collected: 6/15/2016 10:10:00 AM Analysis Type: Initial Dilution: 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
1,1,2,2-TETRACHLOROETHANE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
1,1,2-TRICHLOROETHANE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
1,2,3-TRICHLOROPROPANE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UX	0.0020	LOD	0.0049	LOQ	mg/Kg	UJ	Ms
2-Butanone [MEK]	0.013	JYX	0.0099	LOD	0.020	LOQ	mg/Kg	J	Rl, Ms, Ms, Ms
2-HEXANONE	0.0020	UYX	0.0020	LOD	0.0049	LOQ	mg/Kg	UJ	Ms
ACETONE	0.22	JYBXQ	0.0020	LOD	0.0099	LOQ	mg/Kg	J	Ms, Ms, Ms, Lcs
BENZENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
BROMOFORM	0.00059	UQXY	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms, Lcs
CHLOROBENZENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
CHLORODIBROMOMETHANE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
CIS-1,3-DICHLOROPROPENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
ETHYLBENZENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
METHYLENE CHLORIDE	0.0017	JQX	0.0020	LOD	0.0049	LOQ	mg/Kg	UJ	Ms, Lcs, Mb
STYRENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
TETRACHLOROETHENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
TOLUENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
TRANS-1,3-DICHLOROPROPENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
TRICHLOROETHENE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms
Xylene (Total)	0.0018	UX	0.0018	LOD	0.0030	LOQ	mg/Kg	UJ	Ms
1,2-DIBROMOETHANE	0.00059	UX	0.00059	LOD	0.00099	LOQ	mg/Kg	UJ	Ms

Sample ID: TB-SO-061516-01 Collected: 6/15/2016 9:00:00 AM Analysis Type: Initial Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.0020	UQY	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs
2-Butanone [MEK]	0.010	UQ	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.010	BYQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Lcs, Mb
BROMOFORM	0.00060	UQY	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
CHLORODIBROMOMETHANE	0.00060	UQY	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
CIS-1,3-DICHLOROPROPENE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA								
Method:	8260C	Matrix:	Soil						

Sample ID: WDS-SB20-06 Collected: 6/15/2016 9:15:00 AM Analysis Type: Initial Dilution: 0.74

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.0078	JY	0.0083	LOD	0.017	LOQ	mg/Kg	J	RI
ACETONE	0.12	YBQ	0.0017	LOD	0.0083	LOQ	mg/Kg	J+	Lcs
BROMOFORM	0.00050	UQY	0.00050	LOD	0.00083	LOQ	mg/Kg	UJ	Lcs

Method Category:	VOA								
Method:	8260C-ME	Matrix:	Soil						

Sample ID: H1-SS01-01 Collected: 6/15/2016 8:40:00 AM Analysis Type: Initial Dilution: 118.5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.12	UQ	0.12	LOD	0.20	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.60	J	0.82	LOD	1.0	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.12	UQ	0.12	LOD	0.20	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.82	UQY	0.82	LOD	1.0	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.24		0.12	LOD	0.20	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.098	J	0.12	LOD	0.41	LOQ	mg/Kg	U	Mb
STYRENE	0.12	UQ	0.12	LOD	0.20	LOQ	mg/Kg	UJ	Lcs

Sample ID: H1-SS01-02 Collected: 6/15/2016 8:50:00 AM Analysis Type: Initial Dilution: 129.1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.11	UQ	0.11	LOD	0.19	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.18	J	0.76	LOD	0.95	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.11	UQ	0.11	LOD	0.19	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.76	UQY	0.76	LOD	0.95	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.23		0.11	LOD	0.19	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.090	J	0.11	LOD	0.38	LOQ	mg/Kg	U	Mb
STYRENE	0.11	UQ	0.11	LOD	0.19	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C-ME
Matrix: Soil

6/15/2016 9:00:00									
Sample ID:H1-SS02-01			Collected: AM		Analysis Type: Initial			Dilution: 101.2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.082	UQ	0.082	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.31	J	0.54	LOD	0.68	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.082	UQ	0.082	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.54	UYQ	0.54	LOD	0.68	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.14		0.082	LOD	0.14	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.14	J	0.082	LOD	0.27	LOQ	mg/Kg	U	Mb
STYRENE	0.082	UQ	0.082	LOD	0.14	LOQ	mg/Kg	UJ	Lcs

6/15/2016 9:05:00									
Sample ID:H1-SS02-02			Collected: AM		Analysis Type: Initial			Dilution: 97.7	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.073	UQ	0.073	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.073	UQ	0.073	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.49	UYQ	0.49	LOD	0.61	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.20		0.073	LOD	0.12	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.067	J	0.073	LOD	0.24	LOQ	mg/Kg	U	Mb
STYRENE	0.073	UQ	0.073	LOD	0.12	LOQ	mg/Kg	UJ	Lcs

6/15/2016 9:40:00									
Sample ID:H2-SS01-01			Collected: AM		Analysis Type: Initial			Dilution: 87.8	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.060	UQ	0.060	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.060	UQ	0.060	LOD	0.10	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.40	UYQ	0.40	LOD	0.50	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.12		0.060	LOD	0.10	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.061	J	0.060	LOD	0.20	LOQ	mg/Kg	U	Mb
STYRENE	0.060	UQ	0.060	LOD	0.10	LOQ	mg/Kg	UJ	Lcs

6/15/2016 9:50:00									
Sample ID:H2-SS01-02			Collected: AM		Analysis Type: Initial			Dilution: 88.2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.058	UQ	0.058	LOD	0.097	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C-ME	Matrix: Soil

Sample ID:H2-SS01-02 Collected: AM 6/15/2016 9:50:00 Analysis Type: Initial Dilution: 88.2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMODICHLOROMETHANE	0.058	UQ	0.058	LOD	0.097	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.39	UYQ	0.39	LOD	0.49	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.13		0.058	LOD	0.097	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.057	J	0.058	LOD	0.19	LOQ	mg/Kg	U	Mb
STYRENE	0.058	UQ	0.058	LOD	0.097	LOQ	mg/Kg	UJ	Lcs

Sample ID:H2-SS02-01 Collected: AM 6/15/2016 10:00:00 Analysis Type: Initial Dilution: 96.6

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.066	UQ	0.066	LOD	0.11	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.073	J	0.44	LOD	0.55	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.066	UQ	0.066	LOD	0.11	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.44	UYQ	0.44	LOD	0.55	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.18		0.066	LOD	0.11	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.059	J	0.066	LOD	0.22	LOQ	mg/Kg	U	Mb
STYRENE	0.066	UQ	0.066	LOD	0.11	LOQ	mg/Kg	UJ	Lcs

Method Category:	VOA	
Method:	8260C-STAR	Matrix: Soil

Sample ID:STB-SB04-06 Collected: AM 6/15/2016 10:05:00 Analysis Type: Initial Dilution: 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.00063	UQ	0.00063	LOD	0.0052	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606585

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0618	6/18/2016 11:50:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	0.015 mg/Kg 0.0045 mg/Kg 0.00058 mg/Kg	TB-SO-061516-01
VOA11B MBLK2 061	6/19/2016 12:07:00 PM	ACETONE METHYLENE CHLORIDE	0.0079 mg/Kg 0.0018 mg/Kg	H2-SS02-02 WDS-SB20-06

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H2-SS02-02(Initial)	METHYLENE CHLORIDE	0.0017 mg/Kg	0.0049U mg/Kg
TB-SO-061516-01(Initial)	ACETONE	0.010 mg/Kg	0.010U mg/Kg

Method: 8260C-ME
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK2 062	6/28/2016 8:53:00 PM	CHLOROMETHANE METHYLENE CHLORIDE	0.024 mg/Kg 0.022 mg/Kg	H1-SS01-01 H1-SS01-02 H1-SS02-01 H1-SS02-02 H2-SS01-01 H2-SS01-02 H2-SS02-01 H2-SS02-02

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H1-SS01-01(Initial)	CHLOROMETHANE	0.24 mg/Kg	0.24U mg/Kg
H1-SS01-01(Initial)	METHYLENE CHLORIDE	0.098 mg/Kg	0.41U mg/Kg
H1-SS01-02(Initial)	CHLOROMETHANE	0.23 mg/Kg	0.23U mg/Kg
H1-SS01-02(Initial)	METHYLENE CHLORIDE	0.090 mg/Kg	0.38U mg/Kg
H1-SS02-01(Initial)	CHLOROMETHANE	0.14 mg/Kg	0.14U mg/Kg
H1-SS02-01(Initial)	METHYLENE CHLORIDE	0.14 mg/Kg	0.27U mg/Kg
H1-SS02-02(Initial)	CHLOROMETHANE	0.20 mg/Kg	0.20U mg/Kg
H1-SS02-02(Initial)	METHYLENE CHLORIDE	0.067 mg/Kg	0.24U mg/Kg
H2-SS01-01(Initial)	CHLOROMETHANE	0.12 mg/Kg	0.12U mg/Kg
H2-SS01-01(Initial)	METHYLENE CHLORIDE	0.061 mg/Kg	0.20U mg/Kg
H2-SS01-02(Initial)	CHLOROMETHANE	0.13 mg/Kg	0.13U mg/Kg
H2-SS01-02(Initial)	METHYLENE CHLORIDE	0.057 mg/Kg	0.19U mg/Kg
H2-SS02-01(Initial)	CHLOROMETHANE	0.18 mg/Kg	0.18U mg/Kg
H2-SS02-01(Initial)	METHYLENE CHLORIDE	0.059 mg/Kg	0.22U mg/Kg

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Method Blank Outlier Report

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C-STAR
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK5 0618	6/18/2016 11:50:00 PM	TOLUENE	0.00058 mg/Kg	STB-SB04-06

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H2-SS02-02MSD (H2-SS02-02)	1,1,1-TRICHLOROETHANE 1,1-DICHLOROETHENE CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROETHANE CHLOROFORM CHLOROMETHANE CIS-1,2-DICHLOROETHENE Dichlorodifluoromethane [Freon-12] Trichlorofluoromethane [Freon-11] VINYL CHLORIDE	- - - - - - - - - - -	- - - - - - - - - - -	73.00-130.00 70.00-131.00 63.00-132.00 70.00-135.00 59.00-139.00 78.00-123.00 50.00-136.00 77.00-123.00 29.00-149.00 62.00-140.00 56.00-135.00	28.41 (25.00) 28.88 (25.00) 37.7 (25.00) 26.19 (25.00) 26.39 (25.00) 25.76 (25.00) 46.87 (25.00) 30.72 (25.00) 29.43 (25.00) 28.39 (25.00) 29.33 (25.00)	1,1,1-TRICHLOROETHANE 1,1-DICHLOROETHENE CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROETHANE CHLOROFORM CHLOROMETHANE CIS-1,2-DICHLOROETHENE Dichlorodifluoromethane [Freon-12] Trichlorofluoromethane [Freon-11] VINYL CHLORIDE	J (all detects)
H2-SS02-02MS H2-SS02-02MSD (H2-SS02-02)	1,1,2,2-TETRACHLOROETHANE 1,1,2-TRICHLOROETHANE 1,2,3-TRICHLOROPROPANE 1,2-DIBROMO-3-CHLOROPROPAN 1,2-DIBROMOETHANE 2-Butanone [MEK] 2-HEXANONE ACETONE BENZENE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE ETHYLBENZENE STYRENE TOLUENE TRANS-1,3-DICHLOROPROPENE Xylene (Total)	- - - - - 153 - 384 - 52.4 64.5 56.4 65.8 43.9 74.2 58.3 64.1	65.4 77.9 61.2 49.5 65.1 -122 13.4 -1940 74.3 41.3 56.1 36.2 60.9 13.5 66.8 35.3 59.1	70.00-124.00 78.00-124.00 73.00-125.00 61.00-132.00 78.00-122.00 51.00-148.00 53.00-145.00 36.00-164.00 77.00-121.00 67.00-132.00 74.00-126.00 74.00-126.00 76.00-122.00 76.00-124.00 77.00-121.00 71.00-130.00 78.00-124.00	38.58 (25.00) 29.53 (25.00) 59.47 (25.00) 50.18 (25.00) 48.35 (25.00) 200 (25.00) 166.66 (25.00) 180.92 (25.00) 33.69 (25.00) 43.65 (25.00) 34.17 (25.00) 62.71 (25.00) 28.11 (25.00) 119.91 (25.00) 30.82 (25.00) 67.92 (25.00) 28.59 (25.00)	1,1,2,2-TETRACHLOROETHANE 1,1,2-TRICHLOROETHANE 1,2,3-TRICHLOROPROPANE 1,2-DIBROMO-3-CHLOROPROPAN 1,2-DIBROMOETHANE 2-Butanone [MEK] 2-HEXANONE ACETONE BENZENE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE ETHYLBENZENE STYRENE TOLUENE TRANS-1,3-DICHLOROPROPENE Xylene (Total)	J(all detects) UJ(all non-detects)
H2-SS02-02MS H2-SS02-02MSD (H2-SS02-02)	1,1,1,2-TETRACHLOROETHANE CHLOROBENZENE TETRACHLOROETHENE TRICHLOROETHENE	73.8 62.5 63.3 72.4	70.7 60.9 67.1 70.4	78.00-125.00 79.00-120.00 73.00-128.00 77.00-123.00	- - - -	1,1,1,2-TETRACHLOROETHANE CHLOROBENZENE TETRACHLOROETHENE TRICHLOROETHENE	J-(all detects) UJ(all non-detects)
H2-SS02-02MSD (H2-SS02-02)	METHYLENE CHLORIDE	-	139	70.00-128.00	-	METHYLENE CHLORIDE	J+(all detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C-ME

Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
H2-SS02-02MS	1,1,1,2-TETRACHLOROETHANE	74.9	69.6	78.00-125.00	-	1,1,1,2-TETRACHLOROETHANE	J-(all detects) UJ(all non-detects)
H2-SS02-02MSD	BROMODICHLOROMETHANE	69.1	65.5	75.00-127.00	-	BROMODICHLOROMETHANE	
(H2-SS02-02)	CHLOROETHANE	31	26.9	59.00-139.00	-	CHLOROETHANE	
	CIS-1,3-DICHLOROPROPENE	73.8	66.1	74.00-126.00	-	CIS-1,3-DICHLOROPROPENE	
	STYRENE	72.3	65	76.00-124.00	-	STYRENE	
	TRANS-1,3-DICHLOROPROPENE	67	63.7	71.00-130.00	-	TRANS-1,3-DICHLOROPROPENE	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06181 VOA11B LCSD 0618 (TB-SO-061516-01)	2-Butanone [MEK] ACETONE	-	213	51.00-148.00	46.01 (25.00)	2-Butanone [MEK] ACETONE	J (all detects) UJ (all non-detects)
VOA11B LCS 06181 VOA11B LCSD 0618 (TB-SO-061516-01)	1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE	59 54.8 66.8	-	61.00-132.00 67.00-132.00 74.00-126.00	-	1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE	J-(all detects) UJ(all non-detects)
VOA11B LCSD 0618 (TB-SO-061516-01)	METHYLENE CHLORIDE	-	145	70.00-128.00	-	METHYLENE CHLORIDE	J+(all detects)
VOA11B LCS2 0618 VOA11B LCSD2 061 (H2-SS02-02 WDS-SB20-06)	BROMOFORM	64.7	63.9	67.00-132.00	-	BROMOFORM	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0618 VOA11B LCSD2 061 (H2-SS02-02 WDS-SB20-06)	ACETONE METHYLENE CHLORIDE	202 140	204 147	36.00-164.00 70.00-128.00	-	ACETONE METHYLENE CHLORIDE	J+(all detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0628 (H1-SS01-01 H1-SS01-02 H1-SS02-01 H1-SS02-02 H2-SS01-01 H2-SS01-02 H2-SS02-01 H2-SS02-02)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE CHLOROETHANE STYRENE	73.4 74.2 0 73	-	78.00-125.00 75.00-127.00 59.00-139.00 76.00-124.00	-	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE CHLOROETHANE STYRENE	J-(all detects) UJ(all non-detects)

Method: 8260C-STAR
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCSD5 0618 (STB-SB04-06)	NAPHTHALENE	-	61.7	62.00-129.00	-	NAPHTHALENE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Reporting Limit Outliers

Lab Reporting Batch ID: 1606585

Laboratory: RTILABS

EDD Filename: EDD_1606585_SEDD_2a_v18_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H2-SS02-02	2-Butanone [MEK] METHYLENE CHLORIDE	JYX JQX	0.013 0.0017	0.020 0.0049	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
WDS-SB20-06	2-Butanone [MEK]	JY	0.0078	0.017	LOQ	mg/Kg	J (all detects)

Method: 8260C-ME
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H1-SS01-01	ACETONE METHYLENE CHLORIDE	J J	0.60 0.098	1.0 0.41	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H1-SS01-02	ACETONE METHYLENE CHLORIDE	J J	0.18 0.090	0.95 0.38	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H1-SS02-01	ACETONE METHYLENE CHLORIDE	J J	0.31 0.14	0.68 0.27	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H1-SS02-02	METHYLENE CHLORIDE	J	0.067	0.24	LOQ	mg/Kg	J (all detects)
H2-SS01-01	METHYLENE CHLORIDE	J	0.061	0.20	LOQ	mg/Kg	J (all detects)
H2-SS01-02	METHYLENE CHLORIDE	J	0.057	0.19	LOQ	mg/Kg	J (all detects)
H2-SS02-01	ACETONE METHYLENE CHLORIDE	J J	0.073 0.059	0.55 0.22	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H2-SS02-02	METHYLENE CHLORIDE	J	0.070	0.20	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606588		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	18 soil samples and 1 trip blank for a project-specific list of VOCs		
Data Reviewer:	Tara Bhat AECOM/Arlington, VA		
Completed:	August 30, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606588. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- NA Field rinsate blank data
- ✗ Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✗ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C	Matrix: Soil

Sample ID: TB-SO-061416-01		6/14/2016 8:00:00		Collected: AM				Analysis Type: Initial		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.010	UQ	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.0096	JYQ	0.0020	LOD	0.010	LOQ	mg/Kg	UJ	Lcs, Lcs, Mb		

Sample ID: WDS-SB01-01		6/14/2016 2:20:00		Collected: PM				Analysis Type: Initial		Dilution: 1.01	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.017	JQ	0.012	LOD	0.024	LOQ	mg/Kg	J	RI, Lcs, Lcs		
ACETONE	0.22	YQ	0.0024	LOD	0.012	LOQ	mg/Kg	J	Lcs, Lcs		

Sample ID: WDS-SB02-02		6/14/2016 2:35:00		Collected: PM				Analysis Type: Initial		Dilution: 1.07	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.0080	JY	0.012	LOD	0.024	LOQ	mg/Kg	J	RI		
ACETONE	0.093	YBQ	0.0024	LOD	0.012	LOQ	mg/Kg	UJ	Lcs, Tb		
BENZENE	0.00062	J	0.00073	LOD	0.0010	LOQ	mg/Kg	J	RI		
BROMOFORM	0.00073	UQY	0.00073	LOD	0.0012	LOQ	mg/Kg	UJ	Lcs		

Sample ID: WDS-SB03-06		6/14/2016 2:40:00		Collected: PM				Analysis Type: Initial		Dilution: 0.95	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-Butanone [MEK]	0.013	JY	0.011	LOD	0.022	LOQ	mg/Kg	J	RI		
ACETONE	0.097	YBQ	0.0022	LOD	0.011	LOQ	mg/Kg	J+	Lcs		
BROMOFORM	0.00067	UQY	0.00067	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs		
CARBON DISULFIDE	0.00094	J	0.00067	LOD	0.0011	LOQ	mg/Kg	J	RI		

Sample ID: WDS-SB06-05		6/14/2016 9:45:00		Collected: AM				Analysis Type: Initial		Dilution: 0.95	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	0.12	YBQ	0.0021	LOD	0.011	LOQ	mg/Kg	J+	Lcs		
BROMOFORM	0.00063	UQY	0.00063	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs		

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C	Matrix: Soil

Sample ID: WDS-SB07-05		Collected: 6/14/2016 9:30:00 AM		Analysis Type: Initial				Dilution: 0.87	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.014	JY	0.011	LOD	0.022	LOQ	mg/Kg	J	RI
ACETONE	0.22	YBQ	0.0022	LOD	0.011	LOQ	mg/Kg	J+	Lcs
BROMOFORM	0.00067	UQY	0.00067	LOD	0.0011	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB14-11		Collected: 6/14/2016 1:10:00 PM		Analysis Type: Initial				Dilution: 0.92	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.014	YBQ	0.0019	LOD	0.0094	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.00056	UYQ	0.00056	LOD	0.00094	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB15-13		Collected: 6/14/2016 11:45:00 AM		Analysis Type: Initial				Dilution: 0.82	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.028	YBQ	0.0018	LOD	0.0090	LOQ	mg/Kg	UJ	Lcs, Mb, Tb
BROMOFORM	0.00054	UYQ	0.00054	LOD	0.00090	LOQ	mg/Kg	UJ	Lcs

Method Category:	VOA	
Method:	8260C-ME	Matrix: Soil

Sample ID: H21-SB01-11		Collected: 6/14/2016 9:05:00 AM		Analysis Type: Initial				Dilution: 111.7	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.076	UQ	0.076	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.076	UQ	0.076	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.51	UYQ	0.51	LOD	0.63	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.18		0.076	LOD	0.13	LOQ	mg/Kg	U	Mb
STYRENE	0.076	UQ	0.076	LOD	0.13	LOQ	mg/Kg	UJ	Lcs

Sample ID: H21-SB02-10		Collected: 6/14/2016 8:55:00 AM		Analysis Type: Initial				Dilution: 83.8	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.056	UQ	0.056	LOD	0.093	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C-ME	Matrix:	Soil

Sample ID:H21-SB02-10		6/14/2016 8:55:00		Collected: AM				Analysis Type: Initial		Dilution: 83.8	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ACETONE	0.13	J	0.37	LOD	0.47	LOQ	mg/Kg	J	RI		
BROMODICHLOROMETHANE	0.056	UQ	0.056	LOD	0.093	LOQ	mg/Kg	UJ	Lcs		
CHLOROETHANE	0.37	UYQ	0.37	LOD	0.47	LOQ	mg/Kg	UJ	Lcs		
CHLOROMETHANE	0.17		0.056	LOD	0.093	LOQ	mg/Kg	U	Mb		
METHYLENE CHLORIDE	0.070	J	0.056	LOD	0.19	LOQ	mg/Kg	J	RI		
STYRENE	0.056	UQ	0.056	LOD	0.093	LOQ	mg/Kg	UJ	Lcs		

Sample ID:H21-SB03-06		6/14/2016 8:35:00		Collected: AM				Analysis Type: Initial		Dilution: 104.2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,1,1,2-TETRACHLOROETHANE	0.073	UQ	0.073	LOD	0.12	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.21	J	0.49	LOD	0.61	LOQ	mg/Kg	J	RI		
BROMODICHLOROMETHANE	0.073	UQ	0.073	LOD	0.12	LOQ	mg/Kg	UJ	Lcs		
CHLOROETHANE	0.49	UYQ	0.49	LOD	0.61	LOQ	mg/Kg	UJ	Lcs		
CHLOROMETHANE	0.16		0.073	LOD	0.12	LOQ	mg/Kg	U	Mb		
STYRENE	0.073	UQ	0.073	LOD	0.12	LOQ	mg/Kg	UJ	Lcs		

Sample ID:H21-SS01-01		6/14/2016 9:00:00		Collected: AM				Analysis Type: Initial		Dilution: 99.6	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,1,1,2-TETRACHLOROETHANE	0.070	UQ	0.070	LOD	0.12	LOQ	mg/Kg	UJ	Lcs		
ACETONE	0.14	J	0.47	LOD	0.58	LOQ	mg/Kg	J	RI		
BROMODICHLOROMETHANE	0.070	UQ	0.070	LOD	0.12	LOQ	mg/Kg	UJ	Lcs		
CHLOROETHANE	0.47	UYQ	0.47	LOD	0.58	LOQ	mg/Kg	UJ	Lcs		
CHLOROMETHANE	0.18		0.070	LOD	0.12	LOQ	mg/Kg	U	Mb		
METHYLENE CHLORIDE	0.054	J	0.070	LOD	0.23	LOQ	mg/Kg	J	RI		
STYRENE	0.070	UQ	0.070	LOD	0.12	LOQ	mg/Kg	UJ	Lcs		

Sample ID:H21-SS02-01		6/14/2016 8:50:00		Collected: AM				Analysis Type: Initial		Dilution: 144.3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,1,1,2-TETRACHLOROETHANE	0.096	UQ	0.096	LOD	0.16	LOQ	mg/Kg	UJ	Lcs		

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	VOA	
Method:	8260C-ME	Matrix: Soil

Sample ID: H21-SS02-01		Collected: 6/14/2016 8:50:00 AM		Analysis Type: Initial			Dilution: 144.3		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	0.27	J	0.64	LOD	0.80	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.096	UQ	0.096	LOD	0.16	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.64	UYQ	0.64	LOD	0.80	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.20		0.096	LOD	0.16	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.072	J	0.096	LOD	0.32	LOQ	mg/Kg	J	RI
STYRENE	0.096	UQ	0.096	LOD	0.16	LOQ	mg/Kg	UJ	Lcs

Sample ID: H21-SS03-01		Collected: 6/14/2016 8:30:00 AM		Analysis Type: Initial			Dilution: 116.1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.23	J	0.53	LOD	0.66	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.53	UYQ	0.53	LOD	0.66	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.19		0.079	LOD	0.13	LOQ	mg/Kg	U	Mb
STYRENE	0.079	UQ	0.079	LOD	0.13	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB04-01		Collected: 6/14/2016 4:00:00 PM		Analysis Type: Initial			Dilution: 94		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.063	UQX	0.063	LOD	0.11	LOQ	mg/Kg	UJ	Ms, Lcs
ACETONE	0.11	J	0.42	LOD	0.53	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.063	UQX	0.063	LOD	0.11	LOQ	mg/Kg	UJ	Ms, Lcs
CHLOROETHANE	0.42	UYQX	0.42	LOD	0.53	LOQ	mg/Kg	UJ	Ms, Lcs
CHLOROMETHANE	0.13		0.063	LOD	0.11	LOQ	mg/Kg	U	Mb
CIS-1,3-DICHLOROPROPENE	0.063	UX	0.063	LOD	0.11	LOQ	mg/Kg	UJ	Ms
STYRENE	0.063	UQX	0.063	LOD	0.11	LOQ	mg/Kg	UJ	Ms, Lcs
TRANS-1,3-DICHLOROPROPENE	0.063	UX	0.063	LOD	0.11	LOQ	mg/Kg	UJ	Ms

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C-ME
Matrix: Soil

Sample ID: WDS-SB05-01 Collected: 6/14/2016 4:05:00 PM Analysis Type: Initial Dilution: 98.6

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.067	UQ	0.067	LOD	0.11	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.067	UQ	0.067	LOD	0.11	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.45	UYQ	0.45	LOD	0.56	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.14		0.067	LOD	0.11	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.055	J	0.067	LOD	0.22	LOQ	mg/Kg	J	RI
STYRENE	0.067	UQ	0.067	LOD	0.11	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB16-13 Collected: 6/14/2016 12:15:00 PM Analysis Type: Initial Dilution: 87.3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.059	UQ	0.059	LOD	0.098	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.059	UQ	0.059	LOD	0.098	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.39	UYQ	0.39	LOD	0.49	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.17		0.059	LOD	0.098	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.044	J	0.059	LOD	0.20	LOQ	mg/Kg	J	RI
STYRENE	0.059	UQ	0.059	LOD	0.098	LOQ	mg/Kg	UJ	Lcs

Sample ID: WDS-SB17-13 Collected: 6/14/2016 12:50:00 PM Analysis Type: Initial Dilution: 89.4

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.057	UQ	0.057	LOD	0.095	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.057	UQ	0.057	LOD	0.095	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.38	UYQ	0.38	LOD	0.48	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.16		0.057	LOD	0.095	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.043	J	0.057	LOD	0.19	LOQ	mg/Kg	J	RI
STYRENE	0.057	UQ	0.057	LOD	0.095	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
RI	Reporting Limit Trace Value
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606588

EDD Filename: EDD_1606588_SEDD_2a_v14

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method:	8260C
Matrix:	Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0621	6/21/2016 10:00:00 AM	ACETONE	0.0049 mg/Kg	TB-SO-061416-01 WDS-SB01-01
VOA11B MBLK2 061	6/19/2016 12:07:00 PM	ACETONE METHYLENE CHLORIDE	0.0079 mg/Kg 0.0018 mg/Kg	WDS-SB02-02 WDS-SB03-06 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
TB-SO-061416-01 (Initial)	ACETONE	0.0096 mg/Kg	0.010U mg/Kg
WDS-SB14-11 (Initial)	ACETONE	0.014 mg/Kg	0.014U mg/Kg
WDS-SB15-13 (Initial)	ACETONE	0.028 mg/Kg	0.028U mg/Kg

Method:	8260C-ME
Matrix:	Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0628	6/28/2016 9:41:00 AM	CHLOROMETHANE	0.020 mg/Kg	H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 WDS-SB04-01 WDS-SB05-01 WDS-SB16-13 WDS-SB17-13

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H21-SB01-11 (Initial)	CHLOROMETHANE	0.18 mg/Kg	0.18U mg/Kg
H21-SB02-10 (Initial)	CHLOROMETHANE	0.17 mg/Kg	0.17U mg/Kg
H21-SB03-06 (Initial)	CHLOROMETHANE	0.16 mg/Kg	0.16U mg/Kg
H21-SS01-01 (Initial)	CHLOROMETHANE	0.18 mg/Kg	0.18U mg/Kg
H21-SS02-01 (Initial)	CHLOROMETHANE	0.20 mg/Kg	0.20U mg/Kg
H21-SS03-01 (Initial)	CHLOROMETHANE	0.19 mg/Kg	0.19U mg/Kg
WDS-SB04-01 (Initial)	CHLOROMETHANE	0.13 mg/Kg	0.13U mg/Kg
WDS-SB05-01 (Initial)	CHLOROMETHANE	0.14 mg/Kg	0.14U mg/Kg
WDS-SB16-13 (Initial)	CHLOROMETHANE	0.17 mg/Kg	0.17U mg/Kg
WDS-SB17-13 (Initial)	CHLOROMETHANE	0.16 mg/Kg	0.16U mg/Kg

Project Name and Number: - USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
WDS-SB04-01MS	1,1,1,2-TETRACHLOROETHANE	76.6	71.2	78.00-125.00	-	1,1,1,2-TETRACHLOROETHANE	J- (all detects) UJ (all non-detects)
WDS-SB04-01MSD	BROMODICHLOROMETHANE	68.7	70.2	75.00-127.00	-	BROMODICHLOROMETHANE	
(WDS-SB04-01)	CHLOROETHANE	32.6	31.5	59.00-139.00	-	CHLOROETHANE	
	CIS-1,3-DICHLOROPROPENE	68.2	67.8	74.00-126.00	-	CIS-1,3-DICHLOROPROPENE	
	STYRENE	70.9	69.1	76.00-124.00	-	STYRENE	
	TRANS-1,3-DICHLOROPROPENE	65.5	64.7	71.00-130.00	-	TRANS-1,3-DICHLOROPROPENE	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0618 VOA11B LCSD2 061 (WDS-SB02-02 WDS-SB03-06 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13)	BROMOFORM	64.7	63.9	67.00-132.00	-	BROMOFORM	J- (all detects) UJ (all non-detects)
VOA11B LCS2 0618 VOA11B LCSD2 061 (WDS-SB02-02 WDS-SB03-06 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13)	ACETONE METHYLENE CHLORIDE	202 140	204 147	36.00-164.00 70.00-128.00	- -	ACETONE METHYLENE CHLORIDE	J+(all detects)
VOA11B LCS 06211 VOA11B LCSD 0621 (TB-SO-061416-01 WDS-SB01-01)	2-Butanone [MEK] ACETONE	160 247	- 178	51.00-148.00 36.00-164.00	36.29 (25.00) 32.19 (25.00)	2-Butanone [MEK] ACETONE	J(all detects) UJ(all non-detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06281 (H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 WDS-SB04-01 WDS-SB05-01 WDS-SB16-13 WDS-SB17-13)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE CHLOROETHANE STYRENE	76 71.8 26.2 73.4	- - - -	78.00-125.00 75.00-127.00 59.00-139.00 76.00-124.00	- - - -	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE CHLOROETHANE STYRENE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: Camp Hero

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Trip Blank Outlier Report

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-SO-061416-01(Initial)	6/14/2016 8:00:00 AM	ACETONE	0.0096 mg/Kg	H21-SB01-11 H21-SB02-10 H21-SB03-06 H21-SS01-01 H21-SS02-01 H21-SS03-01 MP-SB01-04 MP-SB01-04 DUP WDS-SB01-01 WDS-SB02-02 WDS-SB03-06 WDS-SB04-01 WDS-SB05-01 WDS-SB06-05 WDS-SB07-05 WDS-SB14-11 WDS-SB15-13 WDS-SB16-13 WDS-SB17-13

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
WDS-SB02-02(Initial)	ACETONE	0.093 mg/Kg	0.093U mg/Kg
WDS-SB14-11(Initial)	ACETONE	0.014 mg/Kg	0.014U mg/Kg
WDS-SB15-13(Initial)	ACETONE	0.028 mg/Kg	0.028U mg/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: 1606588

Laboratory: RTILABS

EDD Filename: EDD_1606588_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-SO-061416-01	ACETONE	JYQ	0.0096	0.010	LOQ	mg/Kg	J (all detects)
WDS-SB01-01	2-Butanone [MEK]	JQ	0.017	0.024	LOQ	mg/Kg	J (all detects)
WDS-SB02-02	2-Butanone [MEK] BENZENE	JY J	0.0080 0.00062	0.024 0.0010	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
WDS-SB03-06	2-Butanone [MEK] CARBON DISULFIDE	JY J	0.013 0.00094	0.022 0.0011	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
WDS-SB07-05	2-Butanone [MEK]	JY	0.014	0.022	LOQ	mg/Kg	J (all detects)

Method: 8260C-ME
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H21-SB02-10	ACETONE METHYLENE CHLORIDE	J J	0.13 0.070	0.47 0.19	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H21-SB03-06	ACETONE	J	0.21	0.61	LOQ	mg/Kg	J (all detects)
H21-SS01-01	ACETONE METHYLENE CHLORIDE	J J	0.14 0.054	0.58 0.23	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H21-SS02-01	ACETONE METHYLENE CHLORIDE	J J	0.27 0.072	0.80 0.32	LOQ LOQ	mg/Kg mg/Kg	J (all detects)
H21-SS03-01	ACETONE	J	0.23	0.66	LOQ	mg/Kg	J (all detects)
WDS-SB04-01	ACETONE	J	0.11	0.53	LOQ	mg/Kg	J (all detects)
WDS-SB05-01	METHYLENE CHLORIDE	J	0.055	0.22	LOQ	mg/Kg	J (all detects)
WDS-SB16-13	METHYLENE CHLORIDE	J	0.044	0.20	LOQ	mg/Kg	J (all detects)
WDS-SB17-13	METHYLENE CHLORIDE	J	0.043	0.19	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606604		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	7 soil samples for a project-specific list of VOCs, PAHs, PCBs, and metals		
Data Reviewer:	Devon Chicoine AECOM/Arlington, VA		
Completed:	August 29, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606604. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✗ Laboratory method blank data
- ✓ Field rinsate blank data
- ✗ Trip blank data
- ✗ Laboratory control sample (LCS) recoveries
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✗ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✗ Field duplicate results
- ✗ Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or during manual data review of the ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:	Soil						

Sample ID: H19-SS01-01		Collected: AM			Analysis Type: Initial			Dilution: 1	
6/15/2016 11:45:00									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.051	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
CADMIUM	0.026	J	0.037	LOD	0.19	LOQ	mg/Kg	J	RI
ARSENIC	1.4	J	0.74	LOD	1.5	LOQ	mg/Kg	J	RI

Sample ID: H19-SS02-01		Collected: AM			Analysis Type: Initial			Dilution: 1	
6/15/2016 11:50:00									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.083	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.055	J	0.039	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: H19-SS02-01 DUP		Collected: AM			Analysis Type: Initial			Dilution: 1	
6/15/2016 11:50:00									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.021	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI, Fd
CADMIUM	0.041	J	0.038	LOD	0.19	LOQ	mg/Kg	J	RI

Sample ID: H22-SS01-01		Collected: PM			Analysis Type: Initial			Dilution: 1	
6/15/2016 12:35:00									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.052	J	0.035	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.2	J	0.70	LOD	3.5	LOQ	mg/Kg	J	RI

Sample ID: H22-SS01-02		Collected: PM			Analysis Type: Initial			Dilution: 1	
6/15/2016 12:45:00									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.055	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI
LEAD	3.4	J	0.73	LOD	3.6	LOQ	mg/Kg	J	RI

Sample ID: H22-SS02-01		Collected: PM			Analysis Type: Initial			Dilution: 1	
6/15/2016 1:00:00									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.029	J	0.036	LOD	0.18	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6010C	Matrix:		Soil					

Sample ID: H22-SS02-02		Collected: 6/15/2016 1:05:00 PM			Analysis Type: Initial			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.019	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI
CADMIUM	0.034	J	0.039	LOD	0.20	LOQ	mg/Kg	J	RI
LEAD	3.8	J	0.78	LOD	3.9	LOQ	mg/Kg	J	RI

Method Category:	METALS								
Method:	6020A-TL	Matrix:		Soil					

Sample ID: H19-SS01-01		Collected: 6/15/2016 11:45:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.058	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: H19-SS02-01		Collected: 6/15/2016 11:50:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.077	J	0.039	LOD	0.16	LOQ	mg/Kg	J	RI

Sample ID: H19-SS02-01 DUP		Collected: 6/15/2016 11:50:00 AM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.097	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: H22-SS01-01		Collected: 6/15/2016 12:35:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.092	J	0.036	LOD	0.15	LOQ	mg/Kg	J	RI

Sample ID: H22-SS01-02		Collected: 6/15/2016 12:45:00 PM			Analysis Type: Initial			Dilution: 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.12	J	0.035	LOD	0.14	LOQ	mg/Kg	J	RI

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-TL	Matrix:		Soil						

Sample ID: H22-SS02-01		Collected: 6/15/2016 1:00:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.056	J	0.038	LOD	0.15	LOQ	mg/Kg	J	RI	

Sample ID: H22-SS02-02		Collected: 6/15/2016 1:05:00 PM			Analysis Type: Initial			Dilution: 10		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
THALLIUM	0.048	J	0.037	LOD	0.15	LOQ	mg/Kg	J	RI	

Method Category:	SVOA									
Method:	8270D-MOD	Matrix:		Soil						

Sample ID: H22-SS01-01		Collected: 6/15/2016 12:35:00 PM			Analysis Type: Initial-ACID			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZOIC ACID	0.36	UY	0.36	LOD	1.1	LOQ	mg/Kg	UJ	Lcs	

Sample ID: H22-SS01-02		Collected: 6/15/2016 12:45:00 PM			Analysis Type: Initial-ACID			Dilution: 3		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZOIC ACID	1.1	UY	1.1	LOD	3.2	LOQ	mg/Kg	UJ	Lcs	

Sample ID: H22-SS02-01		Collected: 6/15/2016 1:00:00 PM			Analysis Type: Initial-ACID			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZOIC ACID	0.38	UY	0.38	LOD	1.1	LOQ	mg/Kg	UJ	Lcs	

Sample ID: H22-SS02-02		Collected: 6/15/2016 1:05:00 PM			Analysis Type: Initial-ACID			Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZOIC ACID	0.38	UY	0.38	LOD	1.2	LOQ	mg/Kg	UJ	Lcs	

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Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method Category:	VOA								
Method:	8260C	Matrix:	Soil						

Sample ID:TB-SO-061516-02		6/15/2016 9:05:00			Analysis Type: Initial			Dilution: 1	
Collected: AM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butanone [MEK]	0.010	UQ	0.010	LOD	0.020	LOQ	mg/Kg	UJ	Lcs, Lcs
ACETONE	0.0013	JZ	0.0020	LOD	0.010	LOQ	mg/Kg	J	RI
CIS-1,3-DICHLOROPROPENE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
METHYLENE CHLORIDE	0.0081	BQ	0.0020	LOD	0.0050	LOQ	mg/Kg	UJ	Lcs, Mb
STYRENE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs
TRANS-1,3-DICHLOROPROPENE	0.00060	UQ	0.00060	LOD	0.0010	LOQ	mg/Kg	UJ	Lcs

Method Category:	VOA								
Method:	8260C-ME	Matrix:	Soil						

Sample ID:H19-SS01-01		6/15/2016 11:45:00			Analysis Type: Initial			Dilution: 111.8	
Collected: AM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.078	UQ	0.078	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.28	J	0.52	LOD	0.65	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.078	UQ	0.078	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.52	UYQ	0.52	LOD	0.65	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.16		0.078	LOD	0.13	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.061	J	0.078	LOD	0.26	LOQ	mg/Kg	J	RI
STYRENE	0.078	UQ	0.078	LOD	0.13	LOQ	mg/Kg	UJ	Lcs

Sample ID:H19-SS02-01		6/15/2016 11:50:00			Analysis Type: Initial			Dilution: 111.2	
Collected: AM									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.078	UQ	0.078	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.23	J	0.52	LOD	0.65	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.078	UQ	0.078	LOD	0.13	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.52	UYQ	0.52	LOD	0.65	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.16		0.078	LOD	0.13	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.078	U	0.078	LOD	0.26	LOQ	mg/Kg	UJ	Fd
STYRENE	0.078	UQ	0.078	LOD	0.13	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C-ME
Matrix: Soil

6/15/2016 11:50:00									
Sample ID:H19-SS02-01 DUP			Collected: AM		Analysis Type: Initial			Dilution: 123.3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.086	UQ	0.086	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.23	J	0.58	LOD	0.72	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.086	UQ	0.086	LOD	0.14	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.58	UYQ	0.58	LOD	0.72	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.19		0.086	LOD	0.14	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.086	J	0.086	LOD	0.29	LOQ	mg/Kg	J	RI, Fd
STYRENE	0.086	UQ	0.086	LOD	0.14	LOQ	mg/Kg	UJ	Lcs

6/15/2016 12:35:00									
Sample ID:H22-SS01-01			Collected: PM		Analysis Type: Initial			Dilution: 104.8	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.070	UQ	0.070	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.17	J	0.46	LOD	0.58	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.070	UQ	0.070	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.46	UYQ	0.46	LOD	0.58	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.16		0.070	LOD	0.12	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.064	J	0.070	LOD	0.23	LOQ	mg/Kg	J	RI
STYRENE	0.070	UQ	0.070	LOD	0.12	LOQ	mg/Kg	UJ	Lcs

6/15/2016 12:45:00									
Sample ID:H22-SS01-02			Collected: PM		Analysis Type: Initial			Dilution: 104.4	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.069	UQ	0.069	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.069	UQ	0.069	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.46	UYQ	0.46	LOD	0.58	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.14		0.069	LOD	0.12	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.060	J	0.069	LOD	0.23	LOQ	mg/Kg	J	RI
STYRENE	0.069	UQ	0.069	LOD	0.12	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C-ME
Matrix: Soil

6/15/2016 1:00:00
Sample ID: H22-SS02-01 **Collected:** PM **Analysis Type:** Initial **Dilution:** 100.2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.069	UQ	0.069	LOD	0.11	LOQ	mg/Kg	UJ	Lcs
ACETONE	0.27	J	0.46	LOD	0.57	LOQ	mg/Kg	J	RI
BROMODICHLOROMETHANE	0.069	UQ	0.069	LOD	0.11	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.46	UYQ	0.46	LOD	0.57	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.15		0.069	LOD	0.11	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.064	J	0.069	LOD	0.23	LOQ	mg/Kg	J	RI
STYRENE	0.069	UQ	0.069	LOD	0.11	LOQ	mg/Kg	UJ	Lcs

6/15/2016 1:05:00
Sample ID: H22-SS02-02 **Collected:** PM **Analysis Type:** Initial **Dilution:** 105.7

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.075	UQ	0.075	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
BROMODICHLOROMETHANE	0.075	UQ	0.075	LOD	0.12	LOQ	mg/Kg	UJ	Lcs
CHLOROETHANE	0.50	UYQ	0.50	LOD	0.62	LOQ	mg/Kg	UJ	Lcs
CHLOROMETHANE	0.17		0.075	LOD	0.12	LOQ	mg/Kg	U	Mb
METHYLENE CHLORIDE	0.073	J	0.075	LOD	0.25	LOQ	mg/Kg	J	RI
STYRENE	0.075	UQ	0.075	LOD	0.12	LOQ	mg/Kg	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606604

EDD Filename: EDD_1606604_SEDD_2a_v6

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method:	8260C
Matrix:	Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA10 MBLK 06231	6/23/2016 2:43:00 PM	METHYLENE CHLORIDE	0.0045 mg/Kg	TB-SO-061516-02

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
TB-SO-061516-02(Initial)	METHYLENE CHLORIDE	0.0081 mg/Kg	0.0081U mg/Kg

Method:	8260C-ME
Matrix:	Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK 0628	6/28/2016 9:41:00 AM	CHLOROMETHANE	0.020 mg/Kg	H19-SS01-01 H19-SS02-01 H19-SS02-01 DUP H22-SS01-01 H22-SS01-02 H22-SS02-01 H22-SS02-02

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
H19-SS01-01(Initial)	CHLOROMETHANE	0.16 mg/Kg	0.16U mg/Kg
H19-SS02-01 DUP(Initial)	CHLOROMETHANE	0.19 mg/Kg	0.19U mg/Kg
H19-SS02-01(Initial)	CHLOROMETHANE	0.16 mg/Kg	0.16U mg/Kg
H22-SS01-01(Initial)	CHLOROMETHANE	0.16 mg/Kg	0.16U mg/Kg
H22-SS01-02(Initial)	CHLOROMETHANE	0.14 mg/Kg	0.14U mg/Kg
H22-SS02-01(Initial)	CHLOROMETHANE	0.15 mg/Kg	0.15U mg/Kg
H22-SS02-02(Initial)	CHLOROMETHANE	0.17 mg/Kg	0.17U mg/Kg

Project Name and Number: - USACE Project: Camp Hero

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
TB-SO-061516-02 (Initial)	TOLUENE-D8	84	85.00-116.00	No Affected Compounds	

Method: 8270D-MOD
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
H22-SS01-02 (Initial)	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	122 124 132	44.00-115.00 37.00-122.00 54.00-127.00	All Base/Neutral Target Analytes	J+ (all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40244 (H22-SS01-01 H22-SS01-02 H22-SS02-01 H22-SS02-02)	BENZOIC ACID	0	-	40.00-117.00	-	BENZOIC ACID	J- (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40280 (H19-SS01-01)	1-METHYLNAPHTHALENE	115	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)
LCS-40290 (H19-SS02-01 H19-SS02-01 DUP H22-SS01-01 H22-SS01-02 H22-SS02-01 H22-SS02-02)	1-METHYLNAPHTHALENE	138	-	43.00-111.00	-	1-METHYLNAPHTHALENE	J+(all detects)

Method: 8260C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA10 LCSD 06231 (TB-SO-061516-02)	2-Butanone [MEK]	-	0	51.00-148.00	200 (25.00)	2-Butanone [MEK]	J(all detects) UJ(all non-detects)
VOA10 LCS 062316 VOA10 LCSD 06231 (TB-SO-061516-02)	CIS-1,3-DICHLOROPROPENE STYRENE TRANS-1,3-DICHLOROPROPENE	73.9 73.1 -	73 - 70.6	74.00-126.00 76.00-124.00 71.00-130.00	- - -	CIS-1,3-DICHLOROPROPENE STYRENE TRANS-1,3-DICHLOROPROPENE	J-(all detects) UJ(all non-detects)
VOA10 LCS 062316 (TB-SO-061516-02)	METHYLENE CHLORIDE	130	-	70.00-128.00	-	METHYLENE CHLORIDE	J+(all detects)

Method: 8260C-ME
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS 06281 (H19-SS01-01 H19-SS02-01 H19-SS02-01 DUP H22-SS01-01 H22-SS01-02 H22-SS02-01 H22-SS02-02)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE CHLOROETHANE STYRENE	76 71.8 26.2 73.4	- - - -	78.00-125.00 75.00-127.00 59.00-139.00 76.00-124.00	- - - -	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE CHLOROETHANE STYRENE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: Camp Hero

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Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>H19-SS02-01 (Dry)</i>	<i>H19-SS02-01 DUP (Dry)</i>			
BERYLLIUM	0.083	0.021	119	50.00	J (all detects) UJ (all non-detects)

Method: 8260C-ME
Matrix: Soil

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>H19-SS02-01</i>	<i>H19-SS02-01 DUP</i>			
METHYLENE CHLORIDE	0.26 U	0.086	200	50.00	J(all detects) UJ(all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H19-SS01-01	ARSENIC	J	1.4	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.051	0.19	LOQ	mg/Kg	
	CADMIUM	J	0.026	0.19	LOQ	mg/Kg	
H19-SS02-01	BERYLLIUM	J	0.083	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.055	0.19	LOQ	mg/Kg	
H19-SS02-01 DUP	BERYLLIUM	J	0.021	0.19	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.041	0.19	LOQ	mg/Kg	
H22-SS01-01	BERYLLIUM	J	0.052	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.2	3.5	LOQ	mg/Kg	
H22-SS01-02	BERYLLIUM	J	0.055	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.4	3.6	LOQ	mg/Kg	
H22-SS02-01	BERYLLIUM	J	0.029	0.18	LOQ	mg/Kg	J (all detects)
H22-SS02-02	BERYLLIUM	J	0.019	0.20	LOQ	mg/Kg	J (all detects)
	CADMIUM	J	0.034	0.20	LOQ	mg/Kg	
	LEAD	J	3.8	3.9	LOQ	mg/Kg	

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H19-SS01-01	THALLIUM	J	0.058	0.15	LOQ	mg/Kg	J (all detects)
H19-SS02-01	THALLIUM	J	0.077	0.16	LOQ	mg/Kg	J (all detects)
H19-SS02-01 DUP	THALLIUM	J	0.097	0.15	LOQ	mg/Kg	J (all detects)
H22-SS01-01	THALLIUM	J	0.092	0.15	LOQ	mg/Kg	J (all detects)
H22-SS01-02	THALLIUM	J	0.12	0.14	LOQ	mg/Kg	J (all detects)
H22-SS02-01	THALLIUM	J	0.056	0.15	LOQ	mg/Kg	J (all detects)
H22-SS02-02	THALLIUM	J	0.048	0.15	LOQ	mg/Kg	J (all detects)

Method: 8260C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-SO-061516-02	ACETONE	JZ	0.0013	0.010	LOQ	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606604

Laboratory: RTILABS

EDD Filename: EDD_1606604_SEDD_2a_v6

eQAPP Name: Former_Camp_Hero

Method: 8260C-ME
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H19-SS01-01	ACETONE	J	0.28	0.65	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	J	0.061	0.26	LOQ	mg/Kg	
H19-SS02-01	ACETONE	J	0.23	0.65	LOQ	mg/Kg	J (all detects)
H19-SS02-01 DUP	ACETONE	J	0.23	0.72	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	J	0.086	0.29	LOQ	mg/Kg	
H22-SS01-01	ACETONE	J	0.17	0.58	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	J	0.064	0.23	LOQ	mg/Kg	
H22-SS01-02	METHYLENE CHLORIDE	J	0.060	0.23	LOQ	mg/Kg	J (all detects)
H22-SS02-01	ACETONE	J	0.27	0.57	LOQ	mg/Kg	J (all detects)
	METHYLENE CHLORIDE	J	0.064	0.23	LOQ	mg/Kg	
H22-SS02-02	METHYLENE CHLORIDE	J	0.073	0.25	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606936		
Date(s) of Collection:	June 7 th , 2016 – June 21 st , 2016		
Number/Type Samples & Analyses:	1 groundwater sample for a project-specific list of VOCs, SVOCs, PCBs, and metals		
Data Reviewer:	Naoum Tavantzis AECOM/Baltimore, MD		
Completed:	August 30, 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for ground water data included in Sample Delivery Group (SDG) 1606936. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- ✓ Field rinsate blank data
- ✓ Trip blank data
- X Laboratory control sample (LCS) recoveries
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- ✓ Laboratory duplicate results
- ✓ Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR and/or added during manual review of the ADR output:

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J-	The result is an estimated quantity, but the result may be biased low.
R	The result was rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A	Matrix:		Water						

Sample ID:H17-SB02-GW Collected: 6/21/2016 10:40:00 AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	3.3	JG	2.5	LOD	5.0	LOQ	ug/L	J	RI

Method Category:	METALS									
Method:	6020A-SA	Matrix:		Water						

Sample ID:H17-SB02-GW Collected: 6/21/2016 10:40:00 AM Analysis Type: Initial/TOT Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.62	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.71	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Method Category:	SVOA									
Method:	8082A	Matrix:		Water						

Sample ID:H17-SB02-GW Collected: 6/21/2016 10:40:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.042	U	0.042	LOD	0.11	LOQ	ug/L	UJ	TempEst
AROCLOR 1221	0.042	U	0.042	LOD	0.11	LOQ	ug/L	UJ	TempEst
AROCLOR 1232	0.043	U	0.043	LOD	0.21	LOQ	ug/L	UJ	TempEst
AROCLOR 1242	0.042	U	0.042	LOD	0.21	LOQ	ug/L	UJ	TempEst
AROCLOR 1248	0.042	U	0.042	LOD	0.11	LOQ	ug/L	UJ	TempEst
AROCLOR 1254	0.042	U	0.042	LOD	0.21	LOQ	ug/L	UJ	TempEst
AROCLOR 1260	0.042	U	0.042	LOD	0.21	LOQ	ug/L	UJ	TempEst
Aroclor 1262	0.11	U	0.11	LOD	0.21	LOQ	ug/L	UJ	TempEst
Aroclor 1268	0.042	U	0.042	LOD	0.11	LOQ	ug/L	UJ	TempEst

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D SIM **Matrix:** Water

Sample ID: H17-SB02-GW **Collected:** 6/21/2016 10:40:00 AM **Analysis Type:** Initial/TOT-BASE/NEUTRAL **Dilution:** 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
2-METHYLNAPHTHALENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
ACENAPHTHENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
ACENAPHTHYLENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
ANTHRACENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
BENZ(A)ANTHRACENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
BENZO(A)PYRENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
BENZO(B)FLUORANTHENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
BENZO(G,H,I)PERYLENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
BENZO(K)FLUORANTHENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
CHRYSENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
DIBENZO(A,H)ANTHRACENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
FLUORANTHENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
FLUORENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
INDENO(1,2,3-CD)PYRENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
NAPHTHALENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
PHENANTHRENE	0.068	UBH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE
PYRENE	0.068	UH	0.068	LOD	0.068	LOQ	ug/L	UJ	TempEst, StoE

Method Category: SVOA
Method: 8270D-MOD **Matrix:** Water

Sample ID: H17-SB02-GW **Collected:** 6/21/2016 10:40:00 AM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Methylphenol (o-Cresol)	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
3/4-Methylphenol [m/p-Cresol]	5.7	UH	5.7	LOD	11	LOQ	ug/L	UJ	TempEst, StoE
4-Chloroaniline [p-Chloroaniline]	1.1	UH	1.1	LOD	11	LOQ	ug/L	UJ	TempEst, StoE

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID:H17-SB02-GW		Collected: AM		6/21/2016 10:40:00				Analysis Type: Initial/TOT-ACID		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2,4,5-TRICHLOROPHENOL	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2,4,6-TRICHLOROPHENOL	1.1	UH	1.1	LOD	4.5	LOQ	ug/L	UJ	TempEst, StoE		
2,4-DICHLOROPHENOL	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2,4-Dimethyl phenol	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2,4-DINITROPHENOL	11	UH	11	LOD	28	LOQ	ug/L	UJ	TempEst, StoE		
2-CHLOROPHENOL	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2-NITROPHENOL	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
4,6-DINITRO-2-METHYLPHENOL	1.1	UH	1.1	LOD	11	LOQ	ug/L	UJ	TempEst, StoE		
4-CHLORO-3-METHYLPHENOL	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
4-NITROPHENOL	2.8	UH	2.8	LOD	28	LOQ	ug/L	UJ	TempEst, Lcs, Lcs, StoE		
BENZOIC ACID	2.8	UYH	2.8	LOD	28	LOQ	ug/L	UJ	TempEst, Lcs, StoE		
PENTACHLOROPHENOL	1.1	UYH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
PHENOL	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		

Sample ID:H17-SB02-GW		Collected: AM		6/21/2016 10:40:00				Analysis Type: Initial/TOT-BASE/NEUTRAL		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,4-TRICHLOROBENZENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
1,2-DICHLOROBENZENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
1,3-DICHLOROBENZENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
1,4-DICHLOROBENZENE	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2,4-DINITROTOLUENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2,6-DINITROTOLUENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2-CHLORONAPHTHALENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
2-NITROANILINE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
3,3'-DICHLOROBENZIDINE	2.8	UH	2.8	LOD	23	LOQ	ug/L	UJ	TempEst, StoE		
3-NITROANILINE	1.1	UH	1.1	LOD	11	LOQ	ug/L	UJ	TempEst, StoE		
4-BROMOPHENYL PHENYL ETHER	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
4-CHLOROPHENYL PHENYL ETHER	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE		
4-NITROANILINE	2.8	UH	2.8	LOD	11	LOQ	ug/L	UJ	TempEst, StoE		
BENZYL ALCOHOL	2.8	UH	2.8	LOD	28	LOQ	ug/L	UJ	TempEst, StoE		

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Sample ID: H17-SB02-GW Collected: 6/21/2016 10:40:00 AM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
bis(2-chloroethoxy) methane	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
BIS(2-CHLOROETHYL) ETHER	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
BIS(2-CHLOROISOPROPYL)ETHER	2.8	UYZH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
BIS(2-ETHYLHEXYL) PHTHALATE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
Butyl benzyl phthalate	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
CARBAZOLE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
DIBENZOFURAN	1.1	UH	1.1	LOD	4.5	LOQ	ug/L	UJ	TempEst, StoE
DIETHYL PHTHALATE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
DIMETHYL PHTHALATE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
DI-N-BUTYL PHTHALATE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
DI-N-OCTYL PHTHALATE	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
HEXACHLOROENZENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
HEXACHLOROBUTADIENE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
HEXACHLOROETHANE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
ISOPHORONE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
NITROBENZENE	2.8	UH	2.8	LOD	3.4	LOQ	ug/L	UJ	TempEst, StoE
N-NITROSODIMETHYLAMINE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, Lcs, StoE
N-Nitrosodi-n-propylamine	2.8	UH	2.8	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE
N-NITROSODIPHENYLAMINE	1.1	UH	1.1	LOD	5.7	LOQ	ug/L	UJ	TempEst, StoE

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: H17-SB02-GW Collected: 6/21/2016 10:40:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1,1-TRICHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1,2,2-TETRACHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1,2-TRICHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1-DICHLOROETHANE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: H17-SB02-GW Collected: 6/21/2016 10:40:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2,3-TRICHLOROPROPANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UY	2.0	LOD	5.0	LOQ	ug/L	R	TempRej
1,2-DIBROMOETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2-DICHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2-DICHLOROPROPANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
2-Butanone [MEK]	5.0	U	5.0	LOD	10	LOQ	ug/L	R	TempRej
2-HEXANONE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej
ACETONE	18		0.60	LOD	10	LOQ	ug/L	J-	TempRej
BENZENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
BROMODICHLOROMETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	R	TempRej, Lcs
CARBON DISULFIDE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CARBON TETRACHLORIDE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CHLOROBENZENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	R	TempRej, Lcs
CHLOROETHANE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej
CHLOROFORM	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CHLOROMETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CIS-1,2-DICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CIS-1,3-DICHLOROPROPENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
Dichlorodifluoromethane [Freon-12]	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
ETHYLBENZENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
METHYLENE CHLORIDE	0.60	U	0.60	LOD	5.0	LOQ	ug/L	R	TempRej
STYRENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TETRACHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TOLUENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TRANS-1,2-DICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TRANS-1,3-DICHLOROPROPENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TRICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
Trichlorofluoromethane [Freon-11]	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
VINYL ACETATE	0.60	U	0.60	LOD	5.0	LOQ	ug/L	R	TempRej

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: H17-SB02-GW		Collected: 6/21/2016 10:40:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VINYL CHLORIDE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
Xylene (Total)	1.8	U	1.8	LOD	3.0	LOQ	ug/L	R	TempRej

Sample ID: TB-GW-062116-03		Collected: 6/21/2016 8:20:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1,1-TRICHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1,2,2-TETRACHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1,2-TRICHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,1-DICHLOROETHANE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej
1,1-DICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2,3-TRICHLOROPROPANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UY	2.0	LOD	5.0	LOQ	ug/L	R	TempRej
1,2-DIBROMOETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2-DICHLOROETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
1,2-DICHLOROPROPANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
2-Butanone [MEK]	5.0	U	5.0	LOD	10	LOQ	ug/L	R	TempRej
2-HEXANONE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej
ACETONE	1.1	J	0.60	LOD	10	LOQ	ug/L	UJ	TempRej, Mb
BENZENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
BROMODICHLOROMETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
BROMOFORM	0.60	UYQZ	0.60	LOD	1.0	LOQ	ug/L	R	TempRej, Lcs
CARBON DISULFIDE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CARBON TETRACHLORIDE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CHLOROETHANE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	R	TempRej, Lcs
CHLOROETHANE	1.0	U	1.0	LOD	2.0	LOQ	ug/L	R	TempRej
CHLOROFORM	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CHLOROMETHANE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CIS-1,2-DICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
CIS-1,3-DICHLOROPROPENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej

* denotes a non-reportable result

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Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: TB-GW-062116-03 Collected: 6/21/2016 8:20:00 AM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Dichlorodifluoromethane [Freon-12]	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
ETHYLBENZENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
METHYLENE CHLORIDE	0.62	J	0.60	LOD	5.0	LOQ	ug/L	UJ	TempRej, Mb
STYRENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TETRACHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TOLUENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TRANS-1,2-DICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TRANS-1,3-DICHLOROPROPENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
TRICHLOROETHENE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
Trichlorofluoromethane [Freon-11]	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
VINYL ACETATE	0.60	U	0.60	LOD	5.0	LOQ	ug/L	R	TempRej
VINYL CHLORIDE	0.60	U	0.60	LOD	1.0	LOQ	ug/L	R	TempRej
Xylene (Total)	1.8	U	1.8	LOD	3.0	LOQ	ug/L	R	TempRej

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
StoE	Sampling to Extraction Estimation
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606936

EDD Filename: EDD_1606936_SEDD_2a_v4

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	SR
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606936
EDD Filename: EDD_1606936_SEDD_2a_v4

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D SIM	Preparation Method: 3510C
Matrix: Water	

Sample ID	Type	Actual	Criteria	Units	Flag
H17-SB02-GW (Initial/TOT)	Sampling To Extraction	8.00	7.00	DAYS	J- (all detects) UJ (all non-detects)

Method: 8270D-MOD	Preparation Method: 3510C
Matrix: Water	

Sample ID	Type	Actual	Criteria	Units	Flag
H17-SB02-GW (Initial/TOT)	Sampling To Extraction	8.00	7.00	DAYS	J-(all detects) UJ(all non-detects)

Temperature Outliers

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Water

SampleID	Analyte	Temperature	Criteria	Flag
H17-SB02-GW	All TCLs	22.6 °C	12.00 °C	J- (all detects) UJ (all non-detects)

Method: 8260C
Matrix: Water

SampleID	Analyte	Temperature	Criteria	Flag
H17-SB02-GW	All TCLs	22.6 °C	6.00 °C	J- (all detects) R (all non-detects)
TB-GW-062116-03	All TCLs	22.6 °C	6.00 °C	J- (all detects) R (all non-detects)

Method: 8270D SIM
Matrix: Water

SampleID	Analyte	Temperature	Criteria	Flag
H17-SB02-GW	All TCLs	22.6 °C	12.00 °C	J- (all detects) UJ (all non-detects)

Method: 8270D-MOD
Matrix: Water

SampleID	Analyte	Temperature	Criteria	Flag
H17-SB02-GW	All TCLs	22.6 °C	12.00 °C	J- (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method:	8260C
Matrix:	Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA11B MBLK2 070	7/1/2016 7:36:00 PM	ACETONE METHYLENE CHLORIDE	0.57 ug/L 0.65 ug/L	H17-SB02-GW TB-GW-062116-03

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
TB-GW-062116-03(Initial/TOT)	ACETONE	1.1 ug/L	10U ug/L
TB-GW-062116-03(Initial/TOT)	METHYLENE CHLORIDE	0.62 ug/L	5.0U ug/L

Method:	8270D SIM
Matrix:	Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40293	8/4/2016 11:32:00 PM	PHENANTHRENE	0.020 ug/L	H17-SB02-GW

Project Name and Number: - USACE Project: Camp Hero

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40292 LCSD-40292 (H17-SB02-GW)	4-NITROPHENOL	35.3	-	50.00-130.00	35.01 (25.00)	4-NITROPHENOL	J (all detects) UJ (all non-detects)
LCS-40292 LCSD-40292 (H17-SB02-GW)	BENZOIC ACID N-NITROSODIMETHYLAMINE	10.3 41.8	11.5 46.1	50.00-130.00 50.00-130.00	- -	BENZOIC ACID N-NITROSODIMETHYLAMINE	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0701 (H17-SB02-GW TB-GW-062116-03)	BROMOFORM CHLORODIBROMOMETHANE	56.1 69.9	- -	66.00-130.00 74.00-126.00	- -	BROMOFORM CHLORODIBROMOMETHANE	J-(all detects) UJ(all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606936

Laboratory: RTILABS

EDD Filename: EDD_1606936_SEDD_2a_v4

eQAPP Name: Former_Camp_Hero

Method: 6020A

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H17-SB02-GW	SELENIUM	JG	3.3	5.0	LOQ	ug/L	J (all detects)

Method: 6020A-SA

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
H17-SB02-GW	ANTIMONY	JG	0.62	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.71	1.5	LOQ	ug/L	

Method: 8260C

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-GW-062116-03	ACETONE	J	1.1	10	LOQ	ug/L	J (all detects)
	METHYLENE CHLORIDE	J	0.62	5.0	LOQ	ug/L	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606631		
Date(s) of Collection:	June 15 th , 2016 – June 17 th , 2016		
Number/Type Samples & Analyses:	14 groundwater samples and 5 trip blanks for a project-specific list of VOCs, SVOCs, PAHs, PCBs, and metals		
Data Reviewer:	Zach Neigh AECOM/Baltimore, MD		
Completed:	August 31 st , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for ground water data included in Sample Delivery Group (SDG) 1606631. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- X Laboratory method blank data
- NA Field rinsate blank data
- X Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- NA Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS	
Method:	6020A	Matrix: Water

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.8	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.57	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB02-GW		Collected: 6/16/2016 2:45:00 PM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.79	JG	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.24	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB03-GW		Collected: 6/16/2016 3:15:00 PM		Analysis Type: Dilution-1/TOT				Dilution: 50	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	6800		25	LOD	500	LOQ	ug/L	J+	Ms

Sample ID: WDS-SB03-GW		Collected: 6/16/2016 3:15:00 PM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.90	J	1.0	LOD	1.5	LOQ	ug/L	J	RI
BERYLLIUM	0.34	JG	0.50	LOD	1.0	LOQ	ug/L	J	RI
CALCIUM	34000	X	120	LOD	1000	LOQ	ug/L	J-	Ms
COBALT	2.2	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
COPPER	3.3	JG	0.50	LOD	5.0	LOQ	ug/L	J	RI
NICKEL	6.0	J	0.50	LOD	10	LOQ	ug/L	J	RI
SODIUM	26000	X	120	LOD	500	LOQ	ug/L	J+	Ms
THALLIUM	0.26	J	0.50	LOD	2.0	LOQ	ug/L	J	RI
ZINC	17	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: WDS-SB08-GW		Collected: 6/17/2016 10:55:00 AM		Analysis Type: Initial/TOT				Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	2.5	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.96	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS								
Method:	6020A	Matrix:	Water						

Sample ID: WDS-SB10-GW		Collected: 6/15/2016 3:45:00 PM			Analysis Type: Dilution-2/TOT			Dilution: 25	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3500	J	620	LOD	5000	LOQ	ug/L	J	RI
NICKEL	39	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: WDS-SB10-GW		Collected: 6/15/2016 3:45:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.36	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
SELENIUM	2.4	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
THALLIUM	0.94	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB12-GW		Collected: 6/17/2016 12:30:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.32	J	0.50	LOD	1.0	LOQ	ug/L	J	RI
THALLIUM	0.38	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB13-GW		Collected: 6/17/2016 12:05:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.37	JG	0.50	LOD	1.0	LOQ	ug/L	J	RI
CHROMIUM	7.3	J	0.50	LOD	10	LOQ	ug/L	J	RI
COBALT	2.3	J	0.50	LOD	5.0	LOQ	ug/L	J	RI
COPPER	4.5	JG	0.50	LOD	5.0	LOQ	ug/L	J	RI
NICKEL	4.6	J	0.50	LOD	10	LOQ	ug/L	J	RI
SELENIUM	1.5	J	2.5	LOD	5.0	LOQ	ug/L	J	RI
ZINC	11	J	2.5	LOD	50	LOQ	ug/L	J	RI

Sample ID: WDS-SB15-GW		Collected: 6/17/2016 11:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.48	J	0.50	LOD	2.0	LOQ	ug/L	J	RI

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	METALS									
Method:	6020A-SA			Matrix: Water						

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.4	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.42	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB02-GW		Collected: 6/16/2016 2:45:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.61	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB03-GW		Collected: 6/16/2016 3:15:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.40	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB08-GW		Collected: 6/17/2016 10:55:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.1	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI
SILVER	0.38	J	0.50	LOD	1.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB12-GW		Collected: 6/17/2016 12:30:00 PM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.34	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

Sample ID: WDS-SB15-GW		Collected: 6/17/2016 11:00:00 AM			Analysis Type: Initial/TOT			Dilution: 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.30	JG	0.75	LOD	2.5	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8082A	Matrix: Water

Sample ID: WDS-SB02-GW Collected: 6/16/2016 2:45:00 PM Analysis Type: Initial/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr
AROCLOR 1221	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr
AROCLOR 1232	0.038	U	0.038	LOD	0.19	LOQ	ug/L	UJ	Surr
AROCLOR 1242	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr
AROCLOR 1248	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr
AROCLOR 1254	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr
AROCLOR 1260	0.037	U	0.037	LOD	0.19	LOQ	ug/L	UJ	Surr
Aroclor 1262	0.093	U	0.093	LOD	0.19	LOQ	ug/L	UJ	Surr
Aroclor 1268	0.037	U	0.037	LOD	0.093	LOQ	ug/L	UJ	Surr

Method Category:	SVOA	
Method:	8270D SIM	Matrix: Water

Sample ID: P113-SB03-GW Collected: 6/16/2016 1:10:00 PM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.050		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
2-METHYLNAPHTHALENE	0.056		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ACENAPHTHENE	0.032		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ACENAPHTHYLENE	0.042		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ANTHRACENE	0.039		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZ(A)ANTHRACENE	0.28		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(A)PYRENE	0.22		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(B)FLUORANTHENE	0.44		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(G,H,I)PERYLENE	0.13		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(K)FLUORANTHENE	0.12		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
CHRYSENE	0.20		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.023		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
FLUORANTHENE	0.42		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
FLUORENE	0.045		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
INDENO(1,2,3-CD)PYRENE	0.097		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
NAPHTHALENE	0.15		0.019	LOD	0.019	LOQ	ug/L	J-	Surr

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Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D SIM	Matrix:	Water

Sample ID: P113-SB03-GW		Collected: 6/16/2016 1:10:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	0.31		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
PYRENE	0.56		0.019	LOD	0.019	LOQ	ug/L	J-	Surr

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM			Analysis Type: Dilution-2/TOT-BASE/ NEUTRAL			Dilution: 50	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	16	H	0.93	LOD	0.93	LOQ	ug/L	J-	EtoA
2-METHYLNAPHTHALENE	5.5	H	0.93	LOD	0.93	LOQ	ug/L	J-	EtoA
ACENAPHTHENE	20	H	0.93	LOD	0.93	LOQ	ug/L	J-	EtoA
FLUORENE	9.8	H	0.93	LOD	0.93	LOQ	ug/L	J-	EtoA
PHENANTHRENE	7.8	H	0.93	LOD	0.93	LOQ	ug/L	J-	EtoA

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM			Analysis Type: Dilution-3/TOT-BASE/ NEUTRAL			Dilution: 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	92	H	3.7	LOD	3.7	LOQ	ug/L	J-	EtoA

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM			Analysis Type: Initial/TOT-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	0.72		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
ANTHRACENE	0.78		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZ(A)ANTHRACENE	0.30		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(A)PYRENE	0.073		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(B)FLUORANTHENE	0.16		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(G,H,I)PERYLENE	0.073		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
BENZO(K)FLUORANTHENE	0.051		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
CHRYSENE	0.14		0.019	LOD	0.019	LOQ	ug/L	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.019	U	0.019	LOD	0.019	LOQ	ug/L	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.061		0.019	LOD	0.019	LOQ	ug/L	J-	Surr

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: P113-SB02-GW		Collected: 6/16/2016 12:20:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.4	UQ	9.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.4	UYQZ	9.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: P113-SB02-GW		Collected: 6/16/2016 12:20:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: P113-SB03-GW		Collected: 6/16/2016 1:10:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.5	UQ	9.5	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	12	JYQZ	9.5	LOD	24	LOQ	ug/L	J	RI, Lcs
PHENOL	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: P113-SB03-GW		Collected: 6/16/2016 1:10:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.3	UQ	9.3	LOD	23	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.6	JYQZ	9.3	LOD	23	LOQ	ug/L	J	RI, Lcs
PHENOL	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: WDS-SB01-GW	6/16/2016 2:20:00		Initial/TOT-BASE/				Dilution: 1		
	Collected: PM	Analysis Type: NEUTRAL	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,3-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.59	J	0.47	LOD	4.7	LOQ	ug/L	J	RI, Surr
2,6-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	9.3	U	9.3	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.93	U	0.93	LOD	9.3	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	0.47	U	0.47	LOD	9.3	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	0.47	U	0.47	LOD	23	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.47	UZ	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	7.6		0.47	LOD	4.7	LOQ	ug/L	J-	Surr
DIBENZOFURAN	13		0.47	LOD	3.7	LOQ	ug/L	J-	Surr
DIETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	0.47	U	0.47	LOD	2.8	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.47	UY	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Sample ID: WDS-SB02-GW	Collected: 6/16/2016 2:45:00 PM	Analysis Type: Initial/TOT-ACID	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.3	UQ	9.3	LOD	23	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	15	JYQZ	9.3	LOD	23	LOQ	ug/L	J	RI, Lcs
PHENOL	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB02-GW	Collected: 6/16/2016 2:45:00 PM	Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	9.3	U	9.3	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.93	U	0.93	LOD	9.3	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	0.47	U	0.47	LOD	9.3	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	0.47	U	0.47	LOD	23	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.47	UZ	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	4.4	J	0.47	LOD	4.7	LOQ	ug/L	J	RI, Surr
DIBENZOFURAN	9.4		0.47	LOD	3.7	LOQ	ug/L	J-	Surr
DIETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: WDS-SB02-GW		6/16/2016 2:45:00			Initial/TOT-BASE/			Dilution: 1	
		Collected: PM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXACHLOROBENZENE	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	0.47	U	0.47	LOD	2.8	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.47	UY	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr

Sample ID: WDS-SB03-GW		6/16/2016 3:15:00			Initial/TOT-ACID			Dilution: 1	
		Collected: PM			Analysis Type: Initial/TOT-ACID				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.3	UQ	9.3	LOD	23	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	11	JYQZ	9.3	LOD	23	LOQ	ug/L	J	RI, Lcs
PHENOL	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB03-GW		6/16/2016 3:15:00			Initial/TOT-BASE/			Dilution: 1	
		Collected: PM			Analysis Type: NEUTRAL				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,2-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	9.3	U	9.3	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.93	U	0.93	LOD	9.3	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	2.3	U	2.3	LOD	4.7	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
4-NITROANILINE	0.47	U	0.47	LOD	9.3	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-MOD	Matrix:	Water

Sample ID: WDS-SB03-GW		Collected: 6/16/2016 3:15:00 PM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZYL ALCOHOL	0.47	U	0.47	LOD	23	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL) ETHER	0.47	UZ	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.31	J	0.47	LOD	3.7	LOQ	ug/L	J	RI, Surr
DIETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
HEXACHLORO BENZENE	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
HEXACHLORO BUTADIENE	0.47	U	0.47	LOD	0.93	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.93	U	0.93	LOD	4.7	LOQ	ug/L	UJ	Surr
NITROBENZENE	0.47	U	0.47	LOD	2.8	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	0.47	U	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.47	UY	0.47	LOD	4.7	LOQ	ug/L	UJ	Surr

Sample ID: WDS-SB08-GW		Collected: 6/17/2016 10:55:00 AM			Analysis Type: Initial/TOT-ACID			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.5	UQ	9.5	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.5	UYQZ	9.5	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB08-GW		Collected: 6/17/2016 10:55:00 AM			Analysis Type: Initial/TOT-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: WDS-SB08-GW Collected: 6/17/2016 10:55:00 AM Analysis Type: Initial/TOT-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
1,3-DICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
1,4-DICHLOROBENZENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
2,4-DINITROTOLUENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
2,6-DINITROTOLUENE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
2-CHLORONAPHTHALENE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
2-NITROANILINE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
3,3'-DICHLOROBENZIDINE	9.5	U	9.5	LOD	19	LOQ	ug/L	UJ	Surr
3-NITROANILINE	0.95	U	0.95	LOD	9.5	LOQ	ug/L	UJ	Surr
4-BROMOPHENYL PHENYL ETHER	2.4	U	2.4	LOD	4.8	LOQ	ug/L	UJ	Surr
4-CHLOROPHENYL PHENYL ETHER	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
4-NITROANILINE	0.48	U	0.48	LOD	9.5	LOQ	ug/L	UJ	Surr
BENZYL ALCOHOL	0.48	U	0.48	LOD	24	LOQ	ug/L	UJ	Surr
bis(2-chloroethoxy) methane	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROETHYL) ETHER	0.48	U	0.48	LOD	0.95	LOQ	ug/L	UJ	Surr
BIS(2-CHLOROISOPROPYL)ETHER	0.48	UZ	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
BIS(2-ETHYLHEXYL) PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
Butyl benzyl phthalate	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
CARBAZOLE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DIBENZOFURAN	0.48	U	0.48	LOD	3.8	LOQ	ug/L	UJ	Surr
DIETHYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DIMETHYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-BUTYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
DI-N-OCTYL PHTHALATE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
HEXACHLOROBENZENE	0.48	U	0.48	LOD	0.95	LOQ	ug/L	UJ	Surr
HEXACHLOROBUTADIENE	0.48	U	0.48	LOD	0.95	LOQ	ug/L	UJ	Surr
HEXACHLOROETHANE	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
ISOPHORONE	0.95	U	0.95	LOD	4.8	LOQ	ug/L	UJ	Surr
NITROBENZENE	0.48	U	0.48	LOD	2.9	LOQ	ug/L	UJ	Surr
N-NITROSODIMETHYLAMINE	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs, Surr
N-Nitrosodi-n-propylamine	0.48	U	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr
N-NITROSODIPHENYLAMINE	0.48	UY	0.48	LOD	4.8	LOQ	ug/L	UJ	Surr

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-MOD
Matrix: Water

Sample ID: WDS-SB10-GW		Collected: 6/15/2016 3:45:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.4	UQ	9.4	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.4	UYQZ	9.4	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB10-GW		Collected: 6/15/2016 3:45:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.47	UQ	0.47	LOD	4.7	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB12-GW		Collected: 6/17/2016 12:30:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.8	UQ	9.8	LOD	25	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.8	UYQZ	9.8	LOD	25	LOQ	ug/L	UJ	Lcs
PHENOL	0.49	UQ	0.49	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB12-GW		Collected: 6/17/2016 12:30:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.49	UQ	0.49	LOD	4.9	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB13-GW		Collected: 6/17/2016 12:05:00 PM		Analysis Type: Initial/TOT-ACID				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.5	UQ	9.5	LOD	24	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.5	UYQZ	9.5	LOD	24	LOQ	ug/L	UJ	Lcs
PHENOL	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB13-GW		Collected: 6/17/2016 12:05:00 PM		Analysis Type: Initial/TOT-BASE/NEUTRAL				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.48	UQ	0.48	LOD	4.8	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA	
Method:	8270D-MOD	Matrix: Water

Sample ID: WDS-SB15-GW		Collected: AM		6/17/2016 11:00:00				Analysis Type: Initial/TOT-ACID	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	9.9	UQ	9.9	LOD	25	LOQ	ug/L	UJ	Lcs
BENZOIC ACID	9.9	UYQZ	9.9	LOD	25	LOQ	ug/L	UJ	Lcs
PHENOL	0.50	UQ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB15-GW		Collected: AM		6/17/2016 11:00:00				Analysis Type: Initial/TOT-BASE/NEUTRAL	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.50	UQ	0.50	LOD	5.0	LOQ	ug/L	UJ	Lcs

Method Category:	VOA	
Method:	8260C	Matrix: Water

Sample ID: P113-SB01-GW		Collected: AM		6/16/2016 11:45:00				Analysis Type: Initial/TOT	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	3.2	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: P113-SB02-GW		Collected: PM		6/16/2016 12:20:00				Analysis Type: Initial/TOT	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	2.4	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: P113-SB03-GW		Collected: PM		6/16/2016 1:10:00				Analysis Type: Initial/TOT	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID:P113-SB03-GW		Collected: 6/16/2016 1:10:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	5.1	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID:TB-GW-061516-01		Collected: 6/15/2016 8:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	3.2	J	0.60	LOD	10	LOQ	ug/L	U	Mb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID:TB-GW-061616-01		Collected: 6/16/2016 8:00:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ACETONE	2.0	JY	0.60	LOD	10	LOQ	ug/L	J	RI
BROMODICHLOROMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	0.72	JBYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs, Mb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.59	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Trichlorofluoromethane [Freon-11]	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID:TB-GW-061616-02		Collected: 6/16/2016 8:10:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ACETONE	4.5	JY	0.60	LOD	10	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA		
Method:	8260C	Matrix:	Water

Sample ID: TB-GW-061616-02		Collected: AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMODICHLOROMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	0.72	JBYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs, Mb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.47	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Trichlorofluoromethane [Freon-11]	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID: TB-GW-061716-01		Collected: AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
ACETONE	3.4	JY	0.60	LOD	10	LOQ	ug/L	J	RI
BROMODICHLOROMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
BROMOFORM	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLORODIBROMOMETHANE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROMETHANE	0.73	JBYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs, Mb
CIS-1,3-DICHLOROPROPENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.41	J	0.60	LOD	5.0	LOQ	ug/L	U	Mb
STYRENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Trichlorofluoromethane [Freon-11]	0.60	UYQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	1.8	UQ	1.8	LOD	3.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB01-GW		Collected: PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	3.2	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA
Method:	8260C
Matrix:	Water

Sample ID: WDS-SB01-GW		Collected: 6/16/2016 2:20:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.56	J	0.60	LOD	1.0	LOQ	ug/L	J	RI
Xylene (Total)	2.6	J	1.8	LOD	3.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB02-GW		Collected: 6/16/2016 2:45:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	2.5	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
Xylene (Total)	2.7	J	1.8	LOD	3.0	LOQ	ug/L	J	RI

Sample ID: WDS-SB03-GW		Collected: 6/16/2016 3:15:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	2.2	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB08-GW		Collected: 6/17/2016 10:55:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	7.6	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB10-GW		Collected: 6/15/2016 3:45:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	5.0	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb

* denotes a non-reportable result

Project Name and Number: - USACE Project: USACE Project: Camp Hero



Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method Category:	VOA									
Method:	8260C			Matrix: Water						

Sample ID: WDS-SB10-GW		Collected: 6/15/2016 3:45:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB12-GW		Collected: 6/17/2016 12:30:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	16		0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB13-GW		Collected: 6/17/2016 12:05:00 PM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	1.8	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

Sample ID: WDS-SB15-GW		Collected: 6/17/2016 11:00:00 AM			Analysis Type: Initial/TOT			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	2.0	UYQ	2.0	LOD	5.0	LOQ	ug/L	UJ	Lcs
ACETONE	4.4	J	0.60	LOD	10	LOQ	ug/L	U	Mb, Tb
BROMOFORM	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs
CHLOROBENZENE	0.60	UQ	0.60	LOD	1.0	LOQ	ug/L	UJ	Lcs

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Data Qualifier Summary

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
EtoA	Extraction to Analysis Estimation
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation
Tb	Trip Blank Contamination

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Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606631

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	SR

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Preparation Method: 3510C

Matrix: Water

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
WDS-SB01-GW (Dilution-2/TOT)	Extraction To Analysis	44.00	40.00	DAYS	J- (all detects)
WDS-SB01-GW (Dilution-3/TOT)		45.00	40.00	DAYS	UJ (all non-detects)

Project Name and Number: - USACE Project:

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Method Blank Outlier Report

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VOA10 MBLK 06281A	6/28/2016 10:54:00 AM	ACETONE	1.8 ug/L	P113-SB01-GW P113-SB02-GW P113-SB03-GW TB-GW-061516-01 WDS-SB01-GW WDS-SB02-GW WDS-SB03-GW WDS-SB08-GW WDS-SB10-GW WDS-SB12-GW WDS-SB13-GW WDS-SB15-GW
VOA11B MBLK2 062	6/27/2016 3:17:00 AM	CHLOROMETHANE METHYLENE CHLORIDE	0.73 ug/L 0.56 ug/L	TB-GW-061616-01 TB-GW-061616-02 TB-GW-061716-01

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
P113-SB01-GW(Initial/TOT)	ACETONE	3.2 ug/L	10U ug/L
P113-SB02-GW(Initial/TOT)	ACETONE	2.4 ug/L	10U ug/L
P113-SB03-GW(Initial/TOT)	ACETONE	5.1 ug/L	10U ug/L
TB-GW-061516-01(Initial/TOT)	ACETONE	3.2 ug/L	10U ug/L
TB-GW-061616-01(Initial/TOT)	CHLOROMETHANE	0.72 ug/L	1.0U ug/L
TB-GW-061616-01(Initial/TOT)	METHYLENE CHLORIDE	0.59 ug/L	5.0U ug/L
TB-GW-061616-02(Initial/TOT)	CHLOROMETHANE	0.72 ug/L	1.0U ug/L
TB-GW-061616-02(Initial/TOT)	METHYLENE CHLORIDE	0.47 ug/L	5.0U ug/L
TB-GW-061716-01(Initial/TOT)	CHLOROMETHANE	0.73 ug/L	1.0U ug/L
TB-GW-061716-01(Initial/TOT)	METHYLENE CHLORIDE	0.41 ug/L	5.0U ug/L
WDS-SB01-GW(Initial/TOT)	ACETONE	3.2 ug/L	10U ug/L
WDS-SB02-GW(Initial/TOT)	ACETONE	2.5 ug/L	10U ug/L
WDS-SB03-GW(Initial/TOT)	ACETONE	2.2 ug/L	10U ug/L
WDS-SB08-GW(Initial/TOT)	ACETONE	7.6 ug/L	10U ug/L
WDS-SB10-GW(Initial/TOT)	ACETONE	5.0 ug/L	10U ug/L
WDS-SB12-GW(Initial/TOT)	ACETONE	16 ug/L	16U ug/L
WDS-SB13-GW(Initial/TOT)	ACETONE	1.8 ug/L	10U ug/L
WDS-SB15-GW(Initial/TOT)	ACETONE	4.4 ug/L	10U ug/L

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Surrogate Outlier Report

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8082A
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
WDS-SB02-GW (Initial/TOT)	TETRACHLORO-M-XYLENE	25.3	40.00-135.00	All Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8260C
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
TB-GW-061616-01 (Initial/TOT)	TOLUENE-D8	87.3	89.00-112.00	No Affected Compounds	
TB-GW-061616-02 (Initial/TOT)	TOLUENE-D8	87.4	89.00-112.00	No Affected Compounds	
TB-GW-061716-01 (Initial/TOT)	TOLUENE-D8	86.6	89.00-112.00	No Affected Compounds	

Method: 8270D SIM
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
P113-SB03-GW (Initial/TOT)	Terphenyl-d14	44.4	50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	24.6 31.5 40.9	44.00-119.00 44.00-120.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Method: 8270D-MOD
Matrix: Water

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
P113-SB02-GW (Initial/TOT)	PHENOL-D5	17.7	30.00-130.00	No Affected Compounds	
P113-SB03-GW (Initial/TOT)	PHENOL-D5 Terphenyl-d14	26.8 39.9	30.00-130.00 50.00-134.00	No Affected Compounds	
WDS-SB01-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5 Terphenyl-d14	28.2 29.9 15.5 42.6	44.00-119.00 44.00-120.00 30.00-130.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB02-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5 Terphenyl-d14	32.8 41.4 20.4 24.8	44.00-119.00 44.00-120.00 30.00-130.00 50.00-134.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB03-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5	39.6 40.2 18.2	44.00-119.00 44.00-120.00 30.00-130.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)
WDS-SB08-GW (Initial/TOT)	2-FLUOROBIPHENYL Nitrobenzene-d5 PHENOL-D5	32.2 32.7 15.4	44.00-119.00 44.00-120.00 30.00-130.00	All Base/Neutral Target Analytes	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

Surrogate Outlier Report

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB10-GW (Initial/TOT)	PHENOL-D5	17.7	30.00-130.00	No Affected Compounds	
WDS-SB12-GW (Initial/TOT)	PHENOL-D5	19	30.00-130.00	No Affected Compounds	
WDS-SB13-GW (Initial/TOT)	PHENOL-D5	23.2	30.00-130.00	No Affected Compounds	
WDS-SB15-GW (Initial/TOT)	PHENOL-D5	17.5	30.00-130.00	No Affected Compounds	

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
WDS-SB03-GWMS (Total) (WDS-SB03-GW)	CALCIUM	43.5	-	87.00-118.00	-	CALCIUM	J- (all detects) UJ (all non-detects)
WDS-SB03-GWMS (Total) WDS-SB03-GWMSD (Total) (WDS-SB03-GW)	ALUMINUM SODIUM	452 -	495 127	84.00-117.00 85.00-117.00	- -	ALUMINUM SODIUM	J+(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D-MOD
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS-40220 LCSD-40220 (P113-SB02-GW P113-SB03-GW WDS-SB01-GW WDS-SB02-GW WDS-SB03-GW WDS-SB08-GW WDS-SB10-GW WDS-SB12-GW WDS-SB13-GW WDS-SB15-GW)	4-NITROPHENOL BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	30 - 34.9 31.6	35.3 47.9 36.2 -	50.00-130.00 50.00-130.00 50.00-130.00 34.00-121.00	- - - -	4-NITROPHENOL BENZOIC ACID N-NITROSODIMETHYLAMINE PHENOL	J- (all detects) UJ (all non-detects)

Method: 8260C
Matrix: Water

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
VOA11B LCS2 0626 VOA11B LCSD2 062 (TB-GW-061616-01 TB-GW-061616-02 TB-GW-061716-01)	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE Trichlorofluoromethane [Freon-11] Xylene (Total)	- 78.8 58.4 65.2 67.8 - - -	73.1 77.2 55.1 62.5 64.5 74.9 62.6 78.2	78.00-124.00 79.00-125.00 66.00-130.00 74.00-126.00 75.00-124.00 78.00-123.00 65.00-141.00 79.00-121.00	- - - - - - - -	1,1,1,2-TETRACHLOROETHANE BROMODICHLOROMETHANE BROMOFORM CHLORODIBROMOMETHANE CIS-1,3-DICHLOROPROPENE STYRENE Trichlorofluoromethane [Freon-11] Xylene (Total)	J-(all detects) UJ(all non-detects)
VOA11B LCS2 0626 VOA11B LCSD2 062 (TB-GW-061616-01 TB-GW-061616-02 TB-GW-061716-01)	CHLOROMETHANE	151	142	50.00-139.00	-	CHLOROMETHANE	J+(all detects)
VOA10 LCSD 06281 (P113-SB01-GW P113-SB02-GW P113-SB03-GW TB-GW-061516-01 WDS-SB01-GW WDS-SB02-GW WDS-SB03-GW WDS-SB08-GW WDS-SB10-GW WDS-SB12-GW WDS-SB13-GW WDS-SB15-GW)	1,2-DIBROMO-3-CHLOROPROPAN BROMOFORM CHLOROBENZENE	- - -	60.5 64.8 81.1	62.00-128.00 66.00-130.00 82.00-118.00	- - -	1,2-DIBROMO-3-CHLOROPROPA BROMOFORM CHLOROBENZENE	J-(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: USACE Project: Camp Hero

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Trip Blank Outlier Report

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-GW-061516-01(Initial/TOT)	6/15/2016 8:00:00 AM	ACETONE	3.2 ug/L	WDS-SB10-GW
TB-GW-061616-01(Initial/TOT)	6/16/2016 8:00:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	2 ug/L 0.72 ug/L 0.59 ug/L	P113-SB02-GW WDS-SB01-GW WDS-SB02-GW WDS-SB03-GW
TB-GW-061616-02(Initial/TOT)	6/16/2016 8:10:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	4.5 ug/L 0.72 ug/L 0.47 ug/L	P113-SB01-GW P113-SB03-GW
TB-GW-061716-01(Initial/TOT)	6/17/2016 8:00:00 AM	ACETONE CHLOROMETHANE METHYLENE CHLORIDE	3.4 ug/L 0.73 ug/L 0.41 ug/L	WDS-SB08-GW WDS-SB12-GW WDS-SB13-GW WDS-SB15-GW

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
P113-SB01-GW(Initial/TOT)	ACETONE	3.2 ug/L	10U ug/L
P113-SB02-GW(Initial/TOT)	ACETONE	2.4 ug/L	10U ug/L
P113-SB03-GW(Initial/TOT)	ACETONE	5.1 ug/L	10U ug/L
WDS-SB01-GW(Initial/TOT)	ACETONE	3.2 ug/L	10U ug/L
WDS-SB02-GW(Initial/TOT)	ACETONE	2.5 ug/L	10U ug/L
WDS-SB03-GW(Initial/TOT)	ACETONE	2.2 ug/L	10U ug/L
WDS-SB08-GW(Initial/TOT)	ACETONE	7.6 ug/L	10U ug/L
WDS-SB10-GW(Initial/TOT)	ACETONE	5.0 ug/L	10U ug/L
WDS-SB12-GW(Initial/TOT)	ACETONE	16 ug/L	16U ug/L
WDS-SB13-GW(Initial/TOT)	ACETONE	1.8 ug/L	10U ug/L
WDS-SB15-GW(Initial/TOT)	ACETONE	4.4 ug/L	10U ug/L

Project Name and Number: - USACE Project: USACE Project: Camp Hero

9/19/2016 9:49:30 PM

ADR version 1.9.0.325

Page 1 of 1

Reporting Limit Outliers

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 6020A
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB01-GW	SELENIUM	J	1.8	5.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.57	2.0	LOQ	ug/L	
WDS-SB02-GW	BERYLLIUM	JG	0.79	1.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.24	2.0	LOQ	ug/L	
WDS-SB03-GW	ARSENIC	J	0.90	1.5	LOQ	ug/L	J (all detects)
	BERYLLIUM	JG	0.34	1.0	LOQ	ug/L	
	COBALT	J	2.2	5.0	LOQ	ug/L	
	COPPER	JG	3.3	5.0	LOQ	ug/L	
	NICKEL	J	6.0	10	LOQ	ug/L	
	THALLIUM	J	0.26	2.0	LOQ	ug/L	
WDS-SB08-GW	SELENIUM	J	2.5	5.0	LOQ	ug/L	J (all detects)
	THALLIUM	J	0.96	2.0	LOQ	ug/L	
WDS-SB10-GW	CADMIUM	J	0.36	1.0	LOQ	ug/L	J (all detects)
	CALCIUM	J	3500	5000	LOQ	ug/L	
	NICKEL	J	39	50	LOQ	ug/L	
	SELENIUM	J	2.4	5.0	LOQ	ug/L	
WDS-SB12-GW	THALLIUM	J	0.94	2.0	LOQ	ug/L	J (all detects)
	CADMIUM	J	0.32	1.0	LOQ	ug/L	
WDS-SB13-GW	THALLIUM	J	0.38	2.0	LOQ	ug/L	J (all detects)
	BERYLLIUM	JG	0.37	1.0	LOQ	ug/L	
	CHROMIUM	J	7.3	10	LOQ	ug/L	
	COBALT	J	2.3	5.0	LOQ	ug/L	
	COPPER	JG	4.5	5.0	LOQ	ug/L	
	NICKEL	J	4.6	10	LOQ	ug/L	
WDS-SB15-GW	SELENIUM	J	1.5	5.0	LOQ	ug/L	J (all detects)
	ZINC	J	11	50	LOQ	ug/L	

Method: 6020A-SA
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
WDS-SB01-GW	ANTIMONY	JG	1.4	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.42	1.5	LOQ	ug/L	
WDS-SB02-GW	ANTIMONY	JG	0.61	2.5	LOQ	ug/L	J (all detects)
WDS-SB03-GW	ANTIMONY	JG	0.40	2.5	LOQ	ug/L	J (all detects)
WDS-SB08-GW	ANTIMONY	JG	1.1	2.5	LOQ	ug/L	J (all detects)
	SILVER	J	0.38	1.5	LOQ	ug/L	
WDS-SB12-GW	ANTIMONY	JG	0.34	2.5	LOQ	ug/L	J (all detects)
WDS-SB15-GW	ANTIMONY	JG	0.30	2.5	LOQ	ug/L	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 1606631

Laboratory: RTILABS

EDD Filename: EDD_1606631_SEDD_2a_v7_rev

eQAPP Name: Former_Camp_Hero

Method: 8260C
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
P113-SB01-GW	ACETONE	J	3.2	10	LOQ	ug/L	J (all detects)
P113-SB02-GW	ACETONE	J	2.4	10	LOQ	ug/L	J (all detects)
P113-SB03-GW	ACETONE	J	5.1	10	LOQ	ug/L	J (all detects)
TB-GW-061516-01	ACETONE	J	3.2	10	LOQ	ug/L	J (all detects)
TB-GW-061616-01	ACETONE	JY	2.0	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JBYQ	0.72	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.59	5.0	LOQ	ug/L	
TB-GW-061616-02	ACETONE	JY	4.5	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JBYQ	0.72	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.47	5.0	LOQ	ug/L	
TB-GW-061716-01	ACETONE	JY	3.4	10	LOQ	ug/L	J (all detects)
	CHLOROMETHANE	JBYQ	0.73	1.0	LOQ	ug/L	
	METHYLENE CHLORIDE	J	0.41	5.0	LOQ	ug/L	
WDS-SB01-GW	ACETONE	J	3.2	10	LOQ	ug/L	J (all detects)
	TOLUENE	J	0.56	1.0	LOQ	ug/L	
	Xylene (Total)	J	2.6	3.0	LOQ	ug/L	
WDS-SB02-GW	ACETONE	J	2.5	10	LOQ	ug/L	J (all detects)
	Xylene (Total)	J	2.7	3.0	LOQ	ug/L	
WDS-SB03-GW	ACETONE	J	2.2	10	LOQ	ug/L	J (all detects)
WDS-SB08-GW	ACETONE	J	7.6	10	LOQ	ug/L	J (all detects)
WDS-SB10-GW	ACETONE	J	5.0	10	LOQ	ug/L	J (all detects)
WDS-SB13-GW	ACETONE	J	1.8	10	LOQ	ug/L	J (all detects)
WDS-SB15-GW	ACETONE	J	4.4	10	LOQ	ug/L	J (all detects)

Method: 8270D-MOD
Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
P113-SB03-GW	BENZOIC ACID	JYQZ	12	24	LOQ	ug/L	J (all detects)
WDS-SB01-GW	2,4-DINITROTOLUENE	J	0.59	4.7	LOQ	ug/L	J (all detects)
	BENZOIC ACID	JYQZ	9.6	23	LOQ	ug/L	
WDS-SB02-GW	BENZOIC ACID	JYQZ	15	23	LOQ	ug/L	J (all detects)
	CARBAZOLE	J	4.4	4.7	LOQ	ug/L	
WDS-SB03-GW	BENZOIC ACID	JYQZ	11	23	LOQ	ug/L	J (all detects)
	DIBENZOFURAN	J	0.31	3.7	LOQ	ug/L	

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606389		
Date(s) of Collection:	June 9 th , 2016		
Number/Type Samples & Analyses:	18 soil samples for a project-specific list of SVOCs by SIM and Metals		
Senior Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 26 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606389. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the *Final 2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- X Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- X Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR and ADR Discrepancy reports.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Review Summary

Lab Reporting Batch ID: 1606389

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



Data Review Summary

Lab Reporting Batch ID: 1606389

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 1606389
EDD Filename: EDD_1606389_SEDD_2a_v6_rev

Laboratory: RTILABS
eQAPP Name: Former_Camp_Hero

Method: 8270D SIM Preparation Method: 3550B
Matrix: Soil

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
BG01-SS05-01 (Dilution-3)	Extraction To Analysis	42.00	40.00	DAYS	J- (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 1606389

Laboratory: RTILABS

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB-40157	7/13/2016 12:22:56 PM	MANGANESE	0.19 mg/Kg	BG01-SB01-05 BG01-SB01-06 BG01-SB02-05 BG01-SB02-06 BG01-SB03-05 BG01-SB03-08 BG01-SB04-04 BG01-SB04-05 BG01-SB04-05 DUP BG01-SS01-01 BG01-SS02-01 BG01-SS03-01 BG01-SS04-01
MB-40215	7/1/2016 12:04:54 PM	POTASSIUM SILVER	4.5 mg/Kg 0.063 mg/Kg	BG01-SS05-01 BG01-SS06-01 BG01-SS07-01 BG01-SS07-01 DUP BG01-SS08-01

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606389

Laboratory: RTILABS

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG01-SB02-05MS (Dry) BG01-SB02-05MSD (Dry) (BG01-SB02-05)	ALUMINUM BARIUM CHROMIUM IRON MAGNESIUM MANGANESE VANADIUM ZINC	- 75.3 84.2 -112 61.4 52.5 75.9 75.8	26.9 79.4 - -202 38.8 47.4 76.2 76.8	74.00-119.00 83.00-113.00 85.00-113.00 81.00-118.00 78.00-115.00 84.00-114.00 82.00-114.00 82.00-113.00	- - - - - - - -	ALUMINUM BARIUM CHROMIUM IRON MAGNESIUM MANGANESE VANADIUM ZINC	J- (all detects) UJ (all non-detects)
BG01-SB02-05MS (Dry) BG01-SB02-05MSD (Dry) (BG01-SB02-05)	CALCIUM	173	118	81.00-116.00	-	CALCIUM	J+(all detects)

Method: 8270D SIM
Matrix: Soil

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
BG01-SB02-05MSD (BG01-SB02-05)	BENZO(K)FLUORANTHENE	-	-	56.00-123.00	33.07 (25.00)	BENZO(K)FLUORANTHENE	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606389

Laboratory: RTILABS

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 8270D SIM

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCS-40172 (BG01-SB01-05 BG01-SB01-06 BG01-SB02-05 BG01-SB02-06 BG01-SB03-05 BG01-SB03-08 BG01-SB04-04 BG01-SB04-05 BG01-SB04-05 DUP BG01-SS01-01 BG01-SS02-01 BG01-SS03-01 BG01-SS04-01 BG01-SS05-01 BG01-SS06-01 BG01-SS07-01)	BENZO(G,H,I)PERYLENE	130	-	49.00-127.00	-	BENZO(G,H,I)PERYLENE	J+ (all detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606389

Laboratory: RTILABS

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG01-SS07-01 (Dry)	BG01-SS07-01 DUP (Dry)			
ARSENIC	0.70	1.2	53	50.00	J (all detects)
BERYLLIUM	0.17	0.051	108	50.00	UJ (all non-detects)

Method: 6020A-TL
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG01-SB04-05 (Dry)	BG01-SB04-05 DUP (Dry)			
THALLIUM	0.17	0.089	63	50.00	J(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	BG01-SS07-01	BG01-SS07-01 DUP			
2-METHYLNAPHTHALENE	0.00073 U	0.00087	200	50.00	J(all detects) UJ(all non-detects)
BENZO(G,H,I)PERYLENE	0.00073 UYQ	0.00084	200	50.00	
NAPHTHALENE	0.00073 U	0.00099	200	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606389

Laboratory: RTILABS

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG01-SB01-05	ARSENIC	J	1.1	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.058	0.19	LOQ	mg/Kg	
	LEAD	J	2.1	3.8	LOQ	mg/Kg	
BG01-SB01-06	BERYLLIUM	J	0.060	0.19	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.4	3.9	LOQ	mg/Kg	
BG01-SB02-05	BERYLLIUM	J	0.023	0.18	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.3	3.7	LOQ	mg/Kg	
BG01-SB02-06	ARSENIC	J	0.75	1.5	LOQ	mg/Kg	J (all detects)
	LEAD	J	2.5	3.6	LOQ	mg/Kg	
BG01-SB03-05	BERYLLIUM	J	0.11	0.20	LOQ	mg/Kg	J (all detects)
	LEAD	J	3.7	4.0	LOQ	mg/Kg	
BG01-SB03-08	LEAD	J	1.8	3.7	LOQ	mg/Kg	J (all detects)
	NICKEL	J	2.7	3.7	LOQ	mg/Kg	
BG01-SB04-04	ANTIMONY	J	0.72	0.78	LOQ	mg/Kg	J (all detects)
	BARIUM	J	5.3	7.8	LOQ	mg/Kg	
	BERYLLIUM	J	0.032	0.20	LOQ	mg/Kg	
	COBALT	J	0.70	0.78	LOQ	mg/Kg	
	LEAD	J	0.61	3.9	LOQ	mg/Kg	
	NICKEL	J	1.6	3.9	LOQ	mg/Kg	
	ZINC	J	3.0	3.9	LOQ	mg/Kg	
BG01-SB04-05	ARSENIC	J	0.82	1.6	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.031	0.19	LOQ	mg/Kg	
	LEAD	J	1.5	3.9	LOQ	mg/Kg	
BG01-SB04-05 DUP	ARSENIC	J	0.85	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.029	0.19	LOQ	mg/Kg	
	LEAD	J	1.5	3.8	LOQ	mg/Kg	
	NICKEL	J	3.6	3.8	LOQ	mg/Kg	
BG01-SS01-01	ARSENIC	J	0.88	1.5	LOQ	mg/Kg	J (all detects)
	SILVER	J	0.066	0.74	LOQ	mg/Kg	
BG01-SS02-01	ARSENIC	J	1.4	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.055	0.18	LOQ	mg/Kg	
	LEAD	J	3.1	3.6	LOQ	mg/Kg	
BG01-SS03-01	ARSENIC	J	1.0	1.5	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.11	0.18	LOQ	mg/Kg	
	LEAD	J	3.3	3.6	LOQ	mg/Kg	
BG01-SS04-01	ARSENIC	J	1.2	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.063	0.18	LOQ	mg/Kg	
BG01-SS05-01	ARSENIC	J	1.3	1.7	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.093	0.21	LOQ	mg/Kg	
	CADMIUM	J	0.047	0.21	LOQ	mg/Kg	
	NICKEL	J	4.2	4.3	LOQ	mg/Kg	
BG01-SS07-01	ARSENIC	J	0.70	1.4	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.17	0.18	LOQ	mg/Kg	
	CADMIUM	J	0.032	0.18	LOQ	mg/Kg	
	LEAD	J	3.2	3.6	LOQ	mg/Kg	
	NICKEL	J	2.9	3.6	LOQ	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 1606389

Laboratory: RTILABS

EDD Filename: EDD_1606389_SEDD_2a_v6_rev

eQAPP Name: Former_Camp_Hero

Method: 6010C
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG01-SS07-01 DUP	ANTIMONY	J	0.54	0.75	LOQ	mg/Kg	J (all detects)
	ARSENIC	J	1.2	1.5	LOQ	mg/Kg	
	BERYLLIUM	J	0.051	0.19	LOQ	mg/Kg	
	CADMIUM	J	0.036	0.19	LOQ	mg/Kg	
	COBALT	J	0.74	0.75	LOQ	mg/Kg	
	NICKEL	J	2.1	3.7	LOQ	mg/Kg	
BG01-SS08-01	ANTIMONY	J	0.45	0.77	LOQ	mg/Kg	J (all detects)
	BERYLLIUM	J	0.051	0.19	LOQ	mg/Kg	
	CADMIUM	J	0.044	0.19	LOQ	mg/Kg	
	COBALT	J	0.57	0.77	LOQ	mg/Kg	
	LEAD	J	3.1	3.9	LOQ	mg/Kg	
	NICKEL	J	1.9	3.9	LOQ	mg/Kg	

Method: 6020A-TL
Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
BG01-SB01-05	THALLIUM	JG	0.096	0.15	LOQ	mg/Kg	J (all detects)
BG01-SB01-06	THALLIUM	JG	0.081	0.15	LOQ	mg/Kg	J (all detects)
BG01-SB02-05	THALLIUM	JG	0.070	0.14	LOQ	mg/Kg	J (all detects)
BG01-SB02-06	THALLIUM	JG	0.060	0.16	LOQ	mg/Kg	J (all detects)
BG01-SB03-05	THALLIUM	JG	0.11	0.16	LOQ	mg/Kg	J (all detects)
BG01-SB03-08	THALLIUM	JG	0.066	0.15	LOQ	mg/Kg	J (all detects)
BG01-SB04-05 DUP	THALLIUM	J	0.089	0.15	LOQ	mg/Kg	J (all detects)
BG01-SS01-01	THALLIUM	JG	0.066	0.14	LOQ	mg/Kg	J (all detects)
BG01-SS02-01	THALLIUM	JG	0.062	0.15	LOQ	mg/Kg	J (all detects)
BG01-SS03-01	THALLIUM	JG	0.062	0.15	LOQ	mg/Kg	J (all detects)
BG01-SS04-01	THALLIUM	JG	0.061	0.15	LOQ	mg/Kg	J (all detects)
BG01-SS05-01	THALLIUM	J	0.14	0.17	LOQ	mg/Kg	J (all detects)
BG01-SS06-01	THALLIUM	J	0.13	0.14	LOQ	mg/Kg	J (all detects)
BG01-SS07-01	THALLIUM	J	0.091	0.15	LOQ	mg/Kg	J (all detects)
BG01-SS07-01 DUP	THALLIUM	J	0.13	0.15	LOQ	mg/Kg	J (all detects)
BG01-SS08-01	THALLIUM	J	0.055	0.15	LOQ	mg/Kg	J (all detects)

Site/Project Name:	Surface Soil, Sub-Surface Soil and Groundwater Temporary Well Sampling, at Former Camp Hero State Park, Montauk, New York.	Page	1
Laboratory:	RTI Laboratories, Inc. – Livonia, MI.		
Laboratory SDG:	1606430		
Date(s) of Collection:	June 12 th , 2016		
Number/Type Samples & Analyses:	18 soil samples for project-specific list of VOC STAR Fuel and SVOC SIM STAR Fuel		
Senior Data Reviewer:	Victoria Kirkpatrick AECOM/Germantown, MD		
Completed:	August 26 th , 2016		

SUMMARY

AECOM conducted a reduced-level data validation on the ADR output for surface soil, sub-surface soil data included in Sample Delivery Group (SDG) 1606430. This reduced-level data validation verified appropriate application of DV qualifications and reviewed laboratory narrative issues to interpret potential data usability for exceedances noted by the ADR and to identify potential issues not included in the ADR. Data quality requirements can be found in the Final *2016 Sampling and Analysis Plan, Remedial Investigation at Former Camp Hero, Montauk, New York*, prepared by AECOM in June, 2016.

REVIEW ELEMENTS

This reduced-level data validation report included an evaluation of the project-specific DQOs in terms of data accuracy, precision, sensitivity, representativeness, and completeness. The validation procedures employed consisted of the following:

Review of ADR output for the following QC parameters:

- ✓ Holding times and sample preservation
- ✓ Laboratory method blank data
- NA Field rinsate blank data
- NA Trip blank data
- X Laboratory control sample (LCS) recoveries
- X Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- X Surrogate recoveries
- NA Laboratory duplicate results
- X Field duplicate results
- X Quantitation limits and sample results

The following additional reviews were conducted on the hardcopy data package:

- ✓ Review of COC documents to verify sample identities
- ✓ Review of laboratory narrative or sample log-in documents to verify any potential problems with custody seals, container integrity, sample preservation, labeling, etc.
- ✓ Spot-check of "J" data, reported below the RL, as reported in the ADR.
- ✓ General reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that data were qualified on the basis of this parameter.

FINDINGS

The following table defines the data qualifiers assigned by ADR.

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is an estimated quantity with an unknown bias.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample limit of detection. However, the reported limit of detection is approximate and may or may not represent the actual limit of detection necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was not detected above the reported limit of detection.

Attachment A presents a summary of qualified data. Based on review of the ADR output and laboratory narrative, all DQOs were met with any exceptions appropriately qualified by ADR. ADR Discrepancy reports are included in Attachment B.

ATTACHMENTS

Attachment A: Data Qualifier Summary and ADR Discrepancy Reports



Data Qualifier Summary

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID: AST35-SB01-05		Collected: 6/12/2016 9:45:00 AM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.0017		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.0027		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.010		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Lcs, Fd
BENZO(A)PYRENE	0.0080		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.011		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.0011		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.0051		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
CHRYSENE	0.0096		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.021		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
FLUORENE	0.0018		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Lcs, Fd
INDENO(1,2,3-CD)PYRENE	0.0057		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.014		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Lcs, Fd
PYRENE	0.018		0.00073	LOD	0.00073	LOQ	mg/Kg	J	Fd

Sample ID: AST35-SB01-05 DUP		Collected: 6/12/2016 9:45:00 AM			Analysis Type: Initial-BASE/NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.00082		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
ANTHRACENE	0.00078		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.0038		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Lcs, Fd
BENZO(A)PYRENE	0.0033		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.0058		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.0027		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.0017		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
CHRYSENE	0.0044		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
FLUORANTHENE	0.0091		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
FLUORENE	0.00089		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Lcs, Fd
INDENO(1,2,3-CD)PYRENE	0.0027		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.0058		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Lcs, Fd
PYRENE	0.0074		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category: SVOA
Method: 8270D-SIM-STAR
Matrix: Soil

Sample ID: AST35-SB04-03		Collected: 6/12/2016 8:40:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	0.011	X	0.00075	LOD	0.00075	LOQ	mg/Kg	J-	Ms
PYRENE	0.011	X	0.00075	LOD	0.00075	LOQ	mg/Kg	J-	Ms

Sample ID: FPH-SB03-02		Collected: 6/12/2016 9:35:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Surr
ACENAPHTHYLENE	0.0021		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
BENZ(A)ANTHRACENE	0.010		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
BENZO(A)PYRENE	0.0060		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
BENZO(B)FLUORANTHENE	0.012		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
BENZO(G,H,I)PERYLENE	0.0063		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
BENZO(K)FLUORANTHENE	0.0020		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
CHRYSENE	0.0061		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
DIBENZO(A,H)ANTHRACENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Surr
FLUORANTHENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Surr
FLUORENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Surr
INDENO(1,2,3-CD)PYRENE	0.0053		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
PHENANTHRENE	0.030		0.00077	LOD	0.00077	LOQ	mg/Kg	J-	Surr
PYRENE	0.00077	U	0.00077	LOD	0.00077	LOQ	mg/Kg	UJ	Surr

Sample ID: FPH-SS01-01		Collected: 6/12/2016 10:15:00 AM			Analysis Type: Dilution-1-BASE/ NEUTRAL			Dilution: 3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	0.046		0.0023	LOD	0.0023	LOQ	mg/Kg	J	Fd

Sample ID: FPH-SS01-01		Collected: 6/12/2016 10:15:00 AM			Analysis Type: Initial-BASE/ NEUTRAL			Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.0072		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.025		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.015		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category:	SVOA		
Method:	8270D-SIM-STAR	Matrix:	Soil

Sample ID: FPH-SS01-01		6/12/2016 10:15:00			Initial-BASE/			Dilution: 1	
		Collected: AM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.026		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.0090		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.0047		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
CHRYSENE	0.015		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
DIBENZO(A,H)ANTHRACENE	0.0039		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.0076		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.037		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd
PYRENE	0.038		0.00076	LOD	0.00076	LOQ	mg/Kg	J	Fd

Sample ID: FPH-SS01-01 DUP		6/12/2016 10:15:00			Initial-BASE/			Dilution: 1	
		Collected: AM	Analysis Type: NEUTRAL						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.0039		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZ(A)ANTHRACENE	0.0021		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(A)PYRENE	0.0016		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(B)FLUORANTHENE	0.0035		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(G,H,I)PERYLENE	0.0016		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
BENZO(K)FLUORANTHENE	0.0010		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
CHRYSENE	0.0019		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
DIBENZO(A,H)ANTHRACENE	0.00074	U	0.00074	LOD	0.00074	LOQ	mg/Kg	UJ	Fd
FLUORANTHENE	0.0041		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
INDENO(1,2,3-CD)PYRENE	0.0013		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
PHENANTHRENE	0.0047		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd
PYRENE	0.0039		0.00074	LOD	0.00074	LOQ	mg/Kg	J	Fd

Method Category:	VOA		
Method:	8260C-STAR	Matrix:	Soil

Sample ID: AST35-SB01-05		6/12/2016 9:45:00			Analysis Type: Initial			Dilution: 0.82	
		Collected: AM							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Isopropyltoluene [p-Cymene]	0.00056	U	0.00056	LOD	0.00093	LOQ	mg/Kg	UJ	Fd

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method Category: VOA
Method: 8260C-STAR
Matrix: Soil

Sample ID: AST35-SB01-05 DUP		Collected: 6/12/2016 9:45:00 AM		Analysis Type: Initial				Dilution: 0.73	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Isopropyltoluene [p-Cymene]	0.00034	J	0.00048	LOD	0.00081	LOQ	mg/Kg	J	RI, Fd

Sample ID: AST35-SB04-03		Collected: 6/12/2016 8:40:00 AM		Analysis Type: Initial				Dilution: 86.6	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRIMETHYLBENZENE	0.059	UQX	0.059	LOD	0.098	LOQ	mg/Kg	UJ	Ms, Lcs
NAPHTHALENE	0.059	UXZ	0.059	LOD	0.49	LOQ	mg/Kg	UJ	Ms
p-Isopropyltoluene [p-Cymene]	0.059	UX	0.059	LOD	0.098	LOQ	mg/Kg	UJ	Ms

Sample ID: FPH-SB04-04		Collected: 6/12/2016 9:00:00 AM		Analysis Type: Initial				Dilution: 93.3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRIMETHYLBENZENE	0.064	UQ	0.064	LOD	0.11	LOQ	mg/Kg	UJ	Lcs

Sample ID: FPH-SB04-05		Collected: 6/12/2016 8:50:00 AM		Analysis Type: Initial				Dilution: 1.28	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHYLBENZENE	0.0012	J	0.00086	LOD	0.0014	LOQ	mg/Kg	J	RI
SEC-BUTYLBENZENE	0.0022	J	0.0014	LOD	0.0029	LOQ	mg/Kg	J	RI

Sample ID: FPH-SS02-01		Collected: 6/12/2016 9:40:00 AM		Analysis Type: Initial				Dilution: 83.9	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRIMETHYLBENZENE	0.058	UQ	0.058	LOD	0.097	LOQ	mg/Kg	UJ	Lcs

Sample ID: FPH-SS03-01		Collected: 6/12/2016 9:30:00 AM		Analysis Type: Initial				Dilution: 111.3	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRIMETHYLBENZENE	0.084	UQ	0.084	LOD	0.14	LOQ	mg/Kg	UJ	Lcs

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Project Name and Number: - USACE Project: Camp Hero

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Data Qualifier Summary

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Fd	Field Duplicate Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Ms	Matrix Spike Lower Estimation
RI	Reporting Limit Trace Value
Surr	Surrogate/Tracer Recovery Lower Estimation

* denotes a non-reportable result

Project Name and Number: - USACE Project: Camp Hero

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Data Review Summary

Lab Reporting Batch ID: 1606430

EDD Filename: EDD_1606430_SEDD_2a_v14

Laboratory: RTILABS

eQAPP Name: Former_Camp_Hero

Validation Area

Note

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	SR
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

Method Blank Outlier Report

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

No Data Review Qualifiers Applied.

Surrogate Outlier Report

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8270D-SIM-STAR
Matrix: Soil

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
FPH-SB03-02 (Initial)	2-FLUOROBIPHENYL	26.5	46.00-115.00	All Base/Neutral Target Analytes	J- (all detects) UJ (all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8270D-SIM-STAR

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
AST35-SB04-03MS (AST35-SB04-03)	FLUORANTHENE PYRENE	39.2 53.7	- -	55.00-119.00 55.00-117.00	- -	FLUORANTHENE PYRENE	J- (all detects) UJ (all non-detects)

Method: 8260C-STAR

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
AST35-SB04-03MS (AST35-SB04-03)	1,2,4-TRIMETHYLBENZENE NAPHTHALENE p-Isopropyltoluene [p-Cymene]	72.2 58.5 70.8	- - -	75.00-123.00 62.00-129.00 73.00-127.00	- - -	1,2,4-TRIMETHYLBENZENE NAPHTHALENE p-Isopropyltoluene [p-Cymene]	J-(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8270D-SIM-STAR

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
LCS-40193 (AST35-SB01-05 AST35-SB01-05 DUP)	BENZ(A)ANTHRACENE FLUORENE PHENANTHRENE	134 116 129	- - -	54.00-122.00 47.00-114.00 49.00-113.00	- - -	BENZ(A)ANTHRACENE FLUORENE PHENANTHRENE	J+ (all detects)

Method: 8260C-STAR

Matrix: Soil

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>LCS %R</i>	<i>LCSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
VOA11B LCS2 0617 (AST35-SB04-03 FPH-SB04-04 FPH-SS02-01 FPH-SS03-01)	1,2,4-TRIMETHYLBENZENE	74.8	-	75.00-123.00	-	1,2,4-TRIMETHYLBENZENE	J-(all detects) UJ(all non-detects)

Field Duplicate Outlier Report

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C-STAR
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	AST35-SB01-05	AST35-SB01-05 DUP			
p-Isopropyltoluene [p-Cymene]	0.00093 U	0.00034	200	50.00	J (all detects) UJ (all non-detects)

Method: 8270D-SIM-STAR
Matrix: Soil

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	AST35-SB01-05	AST35-SB01-05 DUP			
ACENAPHTHENE	0.0017	0.00082	70	50.00	J(all detects) UJ(all non-detects)
ANTHRACENE	0.0027	0.00078	110	50.00	
BENZ(A)ANTHRACENE	0.010	0.0038	90	50.00	
BENZO(A)PYRENE	0.0080	0.0033	83	50.00	
BENZO(B)FLUORANTHENE	0.011	0.0058	62	50.00	
BENZO(G,H,I)PERYLENE	0.0011	0.0027	84	50.00	
BENZO(K)FLUORANTHENE	0.0051	0.0017	100	50.00	
CHRYSENE	0.0096	0.0044	74	50.00	
FLUORANTHENE	0.021	0.0091	79	50.00	
FLUORENE	0.0018	0.00089	68	50.00	
INDENO(1,2,3-CD)PYRENE	0.0057	0.0027	71	50.00	
PHENANTHRENE	0.014	0.0058	83	50.00	
PYRENE	0.018	0.0074	83	50.00	

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	FPH-SS01-01	FPH-SS01-01 DUP			
ANTHRACENE	0.0072	0.0039	59	50.00	J(all detects) UJ(all non-detects)
BENZ(A)ANTHRACENE	0.025	0.0021	169	50.00	
BENZO(A)PYRENE	0.015	0.0016	161	50.00	
BENZO(B)FLUORANTHENE	0.026	0.0035	153	50.00	
BENZO(G,H,I)PERYLENE	0.0090	0.0016	140	50.00	
BENZO(K)FLUORANTHENE	0.0047	0.0010	130	50.00	
CHRYSENE	0.015	0.0019	155	50.00	
DIBENZO(A,H)ANTHRACENE	0.0039	0.00074 U	200	50.00	
FLUORANTHENE	0.046	0.0041	167	50.00	
INDENO(1,2,3-CD)PYRENE	0.0076	0.0013	142	50.00	
PHENANTHRENE	0.037	0.0047	155	50.00	
PYRENE	0.038	0.0039	163	50.00	

Project Name and Number: - USACE Project: Camp Hero

9/20/2016 6:06:22 AM

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Page 1 of 1

Reporting Limit Outliers

Lab Reporting Batch ID: 1606430

Laboratory: RTILABS

EDD Filename: EDD_1606430_SEDD_2a_v14

eQAPP Name: Former_Camp_Hero

Method: 8260C-STAR

Matrix: Soil

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
AST35-SB01-05 DUP	p-Isopropyltoluene [p-Cymene]	J	0.00034	0.00081	LOQ	mg/Kg	J (all detects)
FPH-SB04-05	ETHYLBENZENE	J	0.0012	0.0014	LOQ	mg/Kg	J (all detects)
	SEC-BUTYLBENZENE	J	0.0022	0.0029	LOQ	mg/Kg	

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Attachment H

Daily Field Reports

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**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 5/16/2016

DR No. 01	WRITTEN BY: Brendan McGuinness	PROJECT NUMBER: 60443903
Weather: 46°F Sunny/Partly Cloudy	Days without a lost time injury: 1	

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Brendan McGuinness	8	Technical Lead	AECOM		Megan Cullen - USACE
Nicole Schulman	10	Geologist	AECOM	1 GPS Base station	
Matt Emmert	8	Geophysicist/UXO Tech II	AECOM	2 schonstedt magnetometers	
Eric Celebrezze	8	Geophysicist	AECOM	1 EM-61 geophysics	
Steve Glenn	8	Botanist	AECOM	3 service trucks	
DAILY TOTAL	42				
TOTAL TO DATE	42				

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):

WORKED PERFORMED BY AECOM

Geophysics - set up GPS base station for calibration. Reviewed geophysical survey sites and conducted initial sweep of each site with schonstead magnetometer. Flagged the vegetated areas of each geophysical site that requires vegetation removal. Swept with magnetometer and visually inspected AGC Sites 1, 2 and 3.

Protected Plant Site Survey - Surveyed and flagged species at Bldg 2010, H-14, H-21, Tank GH-9, H-19, H-20, and H-22.

AECOM performed site survey for suspected well pump tank F shown on historic plans but could not find a well or well house. Debris and a brick cesspool manhole was identified in the area of the suspected well and potential UST. However the area appeared to be historically graded, disturbed and a overgrown with thick vegetation.

AECOM performed additional site survey for suspected open pits at H-21 described in the Cashin 1995 Report but could not locate such site features. Manholes for the site wide septic sytem were found but no open pits. Additional field review is planned with USACE on-site staff tomorrow.

WORK COMPLETED BY AECOM SUBCONTRACTORS

- None

SAMPLING PERFORMED:

- None

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone recors, and/or logbooks for details)

Based on the heavy presence of protected plant species at the suspected UST G (remote well house), the use of a Shonstedt hand-held magnetometer was initially proposed, rather than EM-61 methods, to reduce vegetation removal and potential protected plant species damage. In addition, like-construction at other well houses suggest that if a UST were present for the well pump, it would typically be small and near the ground surface - therefore readily detected with a magnetometer.



United States Army Corps of Engineers
 Former Camp Hero Remedial Investigation
 Montauk, New York

Contractor Daily Reports

DATE: 5/16/2016

DR No. 01 | WRITTEN BY: Brendan McGuinness | PROJECT NUMBER: 60443903

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

Safety meeting held in the morning. Discussed the infestation of ticks in the area and preventive care such as appropriate clothing and insecticides.

SITE OBSERVATIONS

- None

Superintendent (Signature):

Brendan McGuinness

Daily Photos



southern Arrowwood plant flagging at H-14



Bldg 2010 and well head Pb in soil

DATE: 5/16/2016

DR No. 01

WRITTEN BY: Brendan McGuinness

PROJECT NUMBER: 60443903



Drum at H-22



Open manhole (old cesspool) at suspected tank F (not found)



Debris at suspected tank F (not found)



Flagging and survey at H-9



Drum at H-20



Boiler at H-9 survey



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 5/16/2016

DR No. 01

WRITTEN BY: Brendan McGuinness

PROJECT NUMBER: 60443903



Debris at Plotting Room 113 (demolished)



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 5/17/2016

DR No. 02 | **WRITTEN BY:** Brendan McGuinness | **PROJECT NUMBER:** 60443903

Weather: 65°F Sunny/Partly Cloudy | **Days without a lost time injury:** 1

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Brendan McGuinness	8	Technical Lead	AECOM	1 GPS Base station	Megan Cullen - USACE
Nicole Schulman	10	Geologist	AECOM	2 schonstedt magnetometers	Mike Penko - USACE
Matt Emmert	9	Geophysicist/UXO Tech II	AECOM	1 EM-61 geophysics	PJ Mion - USACE
Eric Celebrezze	9	Geophysicist	AECOM	3 service trucks	
Steve Glenn	9	Botanist	AECOM	brush hog chain saw	
CGE	8	Veg Removal	CGE	Weed trimmer	
CGE	8	Veg Removal	CGE		
DAILY TOTAL	61				
TOTAL TO DATE	103				

SUBCONTRACTORS: | **SITE DELIVERIES (indicate size, type, and condition):**

CGE	

WORKED PERFORMED BY AECOM

Protected Plant Site Survey-Surveyed and flagged species at H-5, H-16, chlorine contact chamber of sanitary system, and Bunker 216 (Bunker 216 required 3.5 hours).
 Geophysics-set up GPS base station. Completed geophysics at Building 22, Building 2, and Building 3001, scouted proposed sites for Wednesday and completed base station diagnostics.
 AECOM performed additional site survey for suspected open pits at H-21 described in the Cashin 1995 Report with USACE and verified location of the referenced pits. AECOM performed site survey for the septic tank near the chlorine chamber of sanitary system but could not locate tank. Manholes for the site wide septic system near the tank were found. Additional field review is location using a hand held GPS unit is planned. AECOM and USACE performed site survey of H-5. The construction debris site was identified and the site location to be updated on site maps.

WORK COMPLETED BY AECOM SUBCONTRACTORS

Vegetation Clearance-Brush removal contractor (CGI) under AECOM oversight cleared brush for drill rig access at Building 112, 113, a portion of background BG-01, Building 2, a portion of H-13 (fuel pump house), and H-13.

SAMPLING PERFORMED:

None



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 5/17/2016

DR No. 02

WRITTEN BY: Brendan McGuinness

PROJECT NUMBER: 60443903

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone recors, and/or logbooks for details)

Add existing monitoring well at Building 22 to sampling program
Redistribute sampling pnts in the motor pool H-5/H-16 to include construction debris uncovered at adjacent former building 34.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

No intrusive work conducted

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

Ticks are pervasive at Camp Hero and require personal vigilance throughout day.

SITE OBSERVATIONS

- None

Superintendent (Signature):

Brendan McGuinness

Daily Photos



Former Building 34 debris near motor pool



botonist flagging protected plants at former Bldg 34 debris



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 5/18/2016

DR No. 03 | **WRITTEN BY:** Brendan McGuinness | **PROJECT NUMBER:** 60443903

Weather: 65°F Sunny/Partly Cloudy | **Days without a lost time injury:** 3

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Brendan McGuinness	8	Technical Lead	AECOM	1 GPS Base station	Megan Cullen - USACE
Nicole Schulman	10	Geologist	AECOM	2 schonstedt magnetometers	Mike Penko - USACE
Matt Emmert	10	Geophysicist/UXO Tech II	AECOM	1 EM-61 geophysics	PJ Mion - USACE
Eric Celebrezze	10	Geophysicist	AECOM	3 service trucks	
Steve Glenn	10	Botanist	AECOM	brush hog chain saw	
CGE	8	Veg Removal	CGE	Weed trimmer	
CGE	8	Veg Removal	CGE		
DAILY TOTAL	64				
TOTAL TO DATE	167				

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
CGE	

WORKED PERFORMED BY AECOM

Protected Plant Site Survey-Surveyed and flagged species at Background locations BG-02, BG-03, and BG-04, and surveyed areas of additional brush clearing required at the fuel pump building. Steve Glenn (AECOM Botanist and Mike Penko (USACE Ecologist) have telephoned and emailed NYS Heritage Program to discuss handling of numerous southern arrowwood seedlings and saplings that exist throughout Camp Hero and in some AOC areas. with NYS Heritage Program.

Geophysics-set up GPS base station. Completed geophysics at Plotting Room 112, Fuel Pump House, and additional coverage at Building 2. AECOM and the USACE project team conducted site survey for protected plants, suitability, and inspected soil types at Background locations BG-02, BG-03, and BG-04. AECOM and the USACE project team conducted site survey of H-3 (Drum location). AECOM and the USACE project team met with Superintendent Dess and reviewed project activities, project team visited recently collapsed Building 10 (post office) and inspected materials inside. The project team drove to Bunker 113 and discussed building access for Bunker 113 and general Camp Hero site access was reviewed for RI Phase 1 drilling activities. Mr. Dess indicated where AECOM/USACE could break into cinder block at Building 113 for entry. Mr. Dess indicated the cinder block at this location could be broken with a sludge hammer. The NYS Parks service could repair the access in wall, possibly installing a steel locking door at that time. Mr. Dess showed the project team the available building at the west gate of Camp Hero which could be utilized for sample preparation. The west gate of the facility could also be used for ingress and egress (utilizing code 6767 for ingress to the park through gate).

WORK COMPLETED BY AECOM SUBCONTRACTORS

Vegetation Clearance-Brush removal contractor (CGI) under AECOM oversight cleared brush for drill rig access at H-14 (coal storage area), at Former Building 34 next to motor pool, Plotting room 113, and additional area for distribution pipe mapping behind the fuel pump house.

SAMPLING PERFORMED:

None



United States Army Corps of Engineers
 Former Camp Hero Remedial Investigation
 Montauk, New York

Contractor Daily Reports

DATE: 5/18/2016

DR No. 03 | WRITTEN BY: Brendan McGuinness | PROJECT NUMBER: 60443903

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

The concrete square secondary retention structure at H-13 (former 200,000 gallon fuel tank) near fuel pump house still has 2-3 feet of standing water. The situation will be monitored to see if water recedes but AECOM discussed the potential that borings scheduled within the former containment structure may need to be relocated to immediately outside of the structure due to standing water.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

No intrusive work conducted

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

Ticks are pervasive at Camp Hero and require personal vigilance throughout day. Promethean impregnated clothing is recommended for field work.

SITE OBSERVATIONS

- None

Superintendent (Signature):

Brendan McGuinness

Daily Photos



Former building foundation near H-3



H-3 abandoned drum



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 5/18/2016

DR No. 03

WRITTEN BY: Brendan McGuinness

PROJECT NUMBER: 60443903



Old motor oil containers and eroded buckets in Building 10



Renovated Guard building proposed for RI sample preparation



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 5/19/2016

DR No. 04 | WRITTEN BY: Eric Celebrezze | PROJECT NUMBER: 60443903

Weather: 64°F Sunny/Partly Cloudy | Days without a lost time injury: 4

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Nicole Schulman	10	Geologist	AECOM		
Matt Emmert	10	Geophysicist/UXO Tech II	AECOM	EM-61 MK2 / RTK GPS	PJ Mion - USACE
Eric Celebrezze	10	Geophysicist	AECOM	EM-61 MK2 / RTK GPS	
Steve Glenn	8	Botanist	AECOM		
CGE	8	Veg Removal	CGE		
CGE	8	Veg Removal	CGE		
DAILY TOTAL	54				
TOTAL TO DATE	221				

SUBCONTRACTORS: | **SITE DELIVERIES (indicate size, type, and condition):**

CGE	

WORKED PERFORMED BY AECOM

Oversite of Veg Removal and Classification of Protected Species. Digital Geophysical Mapping at the Fire House, Battery 216, and Plotting Room 113.

WORK COMPLETED BY AECOM SUBCONTRACTORS

Veg Removal at Battery 216 and Plotting Room 113

SAMPLING PERFORMED:

- None

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone recors, and/or logbooks for details)

- None

REQUEST FOR INFORMATION (RFI)

- None



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 5/19/2016

DR No. 04

WRITTEN BY: Eric Celebrezze

PROJECT NUMBER: 60443903

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- None

SITE OBSERVATIONS

- None

Superintendent (Signature):

Eric Celebrezze

Daily Photos

- No photos taken on 5/19/2016 (geophysics crew cannot have metal or electronics while working due to interference)



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 5/20/2016

DR No. 05 | WRITTEN BY: Eric Celebrezze | PROJECT NUMBER: 60443903

Weather: 64°F Sunny/Partly Cloudy | Days without a lost time injury: 5

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Nicole Schulman	0	Geologist	AECOM		
Matt Emmert	10	Geophysicist/UXO Tech II	AECOM	EM-61 MK2 / RTK GPS	
Eric Celebrezze	10	Geophysicist	AECOM	EM-61 MK2 / RTK GPS	
Steve Glenn	0	Botanist	AECOM		
CGE	0	Veg Removal	CGE		
CGE	0	Veg Removal	CGE		
DAILY TOTAL	20				
TOTAL TO DATE	241				

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
None	None

WORKED PERFORMED BY AECOM
 Digital Geophysical Mapping at Battery 216 and Plotting Room 113. Analog Geophysical at Battery 113.

WORK COMPLETED BY AECOM SUBCONTRACTORS
 None

SAMPLING PERFORMED:
 - None

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone recors, and/or logbooks for details)
 - None

REQUEST FOR INFORMATION (RFI)
 - None



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 5/20/2016

DR No. 05

WRITTEN BY: Eric Celebrezze

PROJECT NUMBER: 60443903

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- None

SITE OBSERVATIONS

- None

Superintendent (Signature):

Eric Celebrezze

Daily Photos

- No photos taken on 5/20/2016 (geophysics crew cannot have metal or electronics while working due to interference)



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 5/23/2016

DR No. 06 | **WRITTEN BY:** Eric Celebrezze | **PROJECT NUMBER:** 60443903

Weather: 68°F Sunny/Partly Cloudy | **Days without a lost time injury:** 6

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Nicole Schulman	13	Geologist	AECOM		
Matt Emmert	12	Geophysicist/UXO Tech II	AECOM	EM-61 MK2 / RTK GPS	
Eric Celebrezze	12	Geophysicist	AECOM	EM-61 MK2 / RTK GPS	
Steve Glenn	0	Botanist	AECOM		
CGE	0	Veg Removal	CGE		
CGE	0	Veg Removal	CGE		
DAILY TOTAL	37				
TOTAL TO DATE	278				

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
CGE	

WORKED PERFORMED BY AECOM
 GPS located manhole covers and wells that were previously found to incorporate into GIS database. Additionally, flagged out 42 anomalies across all areas of concern found by the DGM field activities. Also conducted analog geophysical survey on battery 216 where due to vegetation a DGM survey was unable to acquire data.

WORK COMPLETED BY AECOM SUBCONTRACTORS

SAMPLING PERFORMED:
 - None

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone recors, and/or logbooks for details)
 - None

REQUEST FOR INFORMATION (RFI)
 - None



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 5/23/2016

DR No. 06

WRITTEN BY: Eric Celebrezze

PROJECT NUMBER: 60443903

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- None

SITE OBSERVATIONS

- None

Superintendent (Signature):

Eric Celebrezze

Daily Photos

- No photos taken on 5/23/2016 (geophysics crew cannot have metal or electronics while working due to interference)



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/6/2016

DR No. 07 | **WRITTEN BY:** Amanda Martin | **PROJECT NUMBER:** 60443903

Weather: 75°F Sunny | **Days without a lost time injury:** 7

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	10.5	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Megan Cullen, USACE
Amanda Martin	10.5	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	PJ Mion, USACE
Brendan McGuinness	3.5	Technical Lead	AECOM	Solonist Water Level Meter (2)	Paul Young, USACE
Nicole Schulman	10.5	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	10.5	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	10.5	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	10.5	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith	3	Driller	NE Geotech	Direct Push Rig (2)	
Mike	3	Driller	NE Geotech		
DAILY TOTAL	72.5				
TOTAL TO DATE	350.5	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech	1 Call-a-head Porta-John - delivered on Friday 6/3/2016
	1 AB Richards Storage Container, 20 ft - delivered Friday 6/3/2016
	(No DR completed on Friday 6/6/2016 because no other work completed on site. Nicole Schulman was on site to receive deliveries)

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and received UXO Awareness Training as part of the Morning Tailgate Health and Safety Meeting. The team reviewed the Work Plan and received a site tour, as all but one of the team had not yet visited the site. The team then organized bottleware, inventoried equipment, and began flagging drilling locations (were able to flag about 1/4 of the boring/sampling locations). Locations H-18, H-7, and H-8 could not be identified by the team, including the USACE team members that were on site. The Tailgate Health and Safety meeting and UXO Awareness training was provided to New England Geotech team members when they arrived on site, and the team assisted them in staging their equipment.

Note that New York 811 - Dig Safe contractors had not completed utility mark-outs by Monday 6/6/2016. Dig Safe tickets were placed on Wednesday 5/25/16, 8 days in advance of the required 2-day notice. Mark-out was originally guaranteed by 0700 on Monday 6/6/2016. On 6/3/16 at 14:36 EDT, participating facility owners responded to the Ticket Check with a 48-hour delay notice (indicating mark-outs would not be completed until possibly 0700 EDT 6/8/2016). AECOM called the responsible contractor, indicating the request was urgent, and was told mark-out would be completed on Monday 6/6/2016. However, no utility mark-out contractor was on site Monday 6/6/2016. Therefore, no drilling could be performed on 6/6/2016.

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech arrived on-site around 12 PM. The team staged their equipment and drums at the Motor Pool, and assembled decontamination pads. Because New York 811 - Dig Safe contractors had not completed utility mark-outs, no drilling could be performed on 6/6/2016.

SAMPLING PERFORMED:

Sampling was completed at AOC H-9 per the RI WP.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- None

REQUEST FOR INFORMATION (RFI)

- None



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/6/2016

DR No. 07 | WRITTEN BY: Amanda Martin | PROJECT NUMBER: 60443903

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- None. No air monitoring was performed because no drilling was completed on 6/6/2016.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- The team took extra precautions with regard to Ticks, by reviewing AECOM's Tick Safety Standard Operating Procedure, treating field clothing with Permethrin, and performing tick-checks throughout the day (with a thorough check at night in the hotel room).

SITE OBSERVATIONS

- Locations H-18, H-7, and H-8 could not be identified by the team (including the USACE visitors).

Superintendent (Signature):

Amanda Martin

Daily Photos



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/6/2016

DR No. 07

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903



Photo 1. A Eastern Box turtle spotted on path to H-15, but not disturbed. The Eastern Box turtle is designated as species of special concern in New York State, as defined in Section 182.2(i) of 6NYCRR Part 182.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/7/2016 Tuesday

DR No. 08		WRITTEN BY: Amanda Martin		PROJECT NUMBER: 60443903	
Weather: 75°F Sunny		Days without a lost time injury: 8			
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	12	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Megan Cullen, USACE
Amanda Martin	12	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	PJ Mion, USACE
Brendan McGuinness	12	Technical Lead	AECOM	Solonist Water Level Meter (2)	Paul Young, USACE
Nicole Schulman	10.5	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	12	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	12	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	12	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith Precious	9.5	Driller	NE Geotech	Direct Push Rig (2)	
Mike Podany	9.5	Driller	NE Geotech		
DAILY TOTAL	101.5				
TOTAL TO DATE	452	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech	None

WORK AND SAMPLING PERFORMED BY AECOM
 The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

UTILITY CLEARANCE
 The New York 811- Dig Safe contractor for National Grid, Long Island Power, and Suffolk County Water arrived on-site around 1000 to complete utility mark-outs. Mark-out was overseen by A. Martin (Site Supervisor) and was completed around 1400. Upon mark-out completion, Ms. Martin submitted AECOM Utility Clearance Checklists to the Mark MacEwan (AECOM Project Manager) for approval, prior to beginning any intrusive activities.

SITE SURVEY AND FLAGGING OF BORING LOCATIONS
 The AECOM team flagged boring locations at AOCs in the morning, while awaiting arrival of the utility clearance contractor. Site survey by the project team was unable to locate debris noted by previous Cashin Report at AOC H-7, H-8, and H-18 on 6/6/2016. Further attempts were made, with a shondstadt survey of each area. H-18 was located but the Shondstadt survey uncovered no results for H-7 or H-8. No further investigation will be completed at these two AOCs.

SOIL SAMPLING
 Surface and near-surface soil samples were collected via hand-auger at H-3 and H-22. Once signed utility clearance checklists were received from the AECOM Project Manager, geoprobe borings (and associated soil sampling) were completed at AOCs H-11 (SB01, SB02), H-12 (SB01), and WDS (SB21 through SB27).

GROUNDWATER SAMPLING
 Temporary wells were set in the borings at AOCs H-11, H-12, and WDS. One groundwater sample was obtained from H11-SB02 for analysis of PAHs and metals. Due to slow groundwater recharge to temporary wells, sufficient sample volume was not available to complete the scheduled groundwater analysis. The temporary wells were covered with plastic and scheduled for further groundwater sampling the following day.

UXO ANOMALY AVOIDANCE
 UXO Anomaly avoidance was performed at the following AOCs. All areas were cleared.

Background 01	H-12
Background 04	H-18
Building 2010	Suspected Tank B
H-11	WDS (SB20 through SB27)

SAMPLE MANAGEMENT AND SHIPMENT
 Soil and groundwater samples collected were held on ice overnight for next-day quality control check and shipment.

WORK COMPLETED BY AECOM SUBCONTRACTORS
 New England Geotech completed borings and set temporary wells at AOC H-11 (SB01 and SB02), H-12 (SB01), and WDS (SB21 through SB27). Additionally, NE Geotech assisted with hand-augering samples at H-3 and H-22.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/7/2016 Tuesday

DR No. 08

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Site survey by the project team was unable to locate debris noted by previous Cashin Report at AOC H-7, H-8, and H-18. The USACE team project manager, Megan Cullen, directed AECOM to conduct magnetometer and visual sweep of these areas. If the debris can not be located with the magnetometer or visually, then no further investigation will be conducted.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

DATE: 6/7/2016 Tuesday

DR No. 08

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

Daily Photos



Photo 1. Drum located at the Cashin H-3 location.



Photo 2. Soil cores at the Waste Disposal System (WDS) AOC. Boring ID: WDS-25. Photos collected of significant soil cores, as determined by AECOM Geologist.



Photo 3. AECOM and New England Geotech collect samples via hand-auger at H-22.



Photo 4. Drum at H-22.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/8/2016 Wednesday

DR No. 9 | **WRITTEN BY:** Amanda Martin | **PROJECT NUMBER:** 60443903

Weather: 75°F Sunny | **Days without a lost time injury:** 9

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	11.5	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Megan Cullen, USACE
Amanda Martin	11.5	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	PJ Mion, USACE
Brendan McGuinness	11.5	Technical Lead	AECOM	Solonist Water Level Meter (2)	Paul Young, USACE
Nicole Schulman	10	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	11.5	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	11.5	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	11.5	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith Precious	10.25	Driller	NE Geotech	Direct Push Rig (2)	
Mike Podany	10.25	Driller	NE Geotech		
DAILY TOTAL	99.5				
TOTAL TO DATE	551.5	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech	None

WORK AND SAMPLING PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Geoprobe borings were completed at the following AOCs.

Former Building 2010 (UST 30). Two soil borings were advanced (SB01 and SB02):

- 2010-SB01: four soil samples were collected (0 - 4, 4 - 5, 5 - 6, 6 - 7 ft bgs) for lead analysis only. One MS/MSD sample was collected at 2010-SB02-04. A temporary well was set at this location because there was no water. PJ Mion (USACE Geologist) agreed with this assessment.
- 2010-SB02: four soil samples were collected (0 - 4, 4 - 5, 5 - 6, 6 - 7 ft bgs) for lead analysis only. Two duplicate samples were collected at 2010-SB02-04 and 2010-SB02-05. A temporary well was set at this location.

Site-Wide Waste Disposal System (WDS). One soil boring was completed (SB20).

- WDS-SB20. One soil sample was collected from 5 - 6 ft bgs for analysis of VOCs, SVOCs/PAHs, PCBs, and metals.

Suspected Tank B (STB). Four borings were completed at STB (SB01 through SB04). One subsurface soil sample was collected from each soil boring at the water table. Three additional surface soil samples were collected via hang-auger (SS05 through SS07). Samples were collected for analysis of NYSDCE STARS fuel oil list VOCs and SVOCs.

Groundwater Sampling was completed at the following AOCs.

- H-11.** Groundwater sampling was completed at the temporary well H11-SB01 for analysis of PAHs and metals.
- Site-Wide Waste Disposal System (WDS).** Groundwater sampling was completed at temporary wells set in borings WDS-SB22, WDS-SB25, and WDS-SB26 for analysis of VOCs, SVOCs/PAHs, PCBs, and metals. Duplicate samples were collected at WDS-SB22 and WDS-SB26. The field team originally attempted to sample WDS-SB27 on Tuesday 6/7/2016, but groundwater recharge was not sufficient to collect the sample volume. The field team decided to leave the well overnight to recharge (per discussion with USACE); however, on Wednesday 6/8/16, the well had still not sufficiently recharged to collect sufficient sample volume. Therefore, only VOCs, PAHs and metals samples were collected at WDS-SB27. Full analysis was obtained from adjacent wells WDS-SB25 and WDS-SB26.

Sample Management and Shipment

Soil and groundwater samples collected on Wednesday 6/8/2016 were checked for Quality Control, recorded on Chain of Custody records, and packed for shipment. Six coolers were delivered to FedEx in East Hampton, NY, and shipped overnight to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

Other Activities

Test pits were conducted at Suspected Tank C. Miscellaneous building debris was uncovered. No evidence of a Tank was identified. Pictures of test pits and debris have been uploaded to the project sharepoint site.
Waste oil cans and containers inside Building 10 were inspected by the AECOM UXO technician and USACE project team. No UXO was identified inside the building. Pictures of waste cans have been uploaded to the project sharepoint site.

The AECOM team held an evening meeting to review the site plans, field progress, and discuss concerns that USACE had brought up over the course of the field work. Specific items such as review of AOC sampling approach prior to field work, decontamination, and control of the pace of sampling by the drilling teams, and field notation were included in the review.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/8/2016 Wednesday

DR No. 9

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geoprobe completed borings and set temporary wells at AOCs former Building 2010 (SB01 and SB02). Temporary wells were abandoned at WDS-SB25, WDS-SB26, and H11-SB02.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Further attempts to collect sufficient groundwater sample for all the proposed analysis at temporary well location WDS-SB27 had been discontinued due to inadequate recharge after 48 hours and complete groundwater analyses were not collected. Building 2010 lead analysis of soil at former UST- One of two temporary wells was not installed due to a steep grade next to building. Because residual petroleum was noted in soil at the suspected tank B site, four subsurface soil samples and three surface soil samples were obtained. No tank was identified through test pits and hand held magnetometer. No tank or impacted soil was observed at suspected tank C, and no further sampling was conducted as discussed with the USACE project team.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/9/2016 Thursday

DR No. 10 WRITTEN BY: Amanda Martin PROJECT NUMBER: 60443903

Weather: 75°F Sunny Days without a lost time injury: 10

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	11.5	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Megan Cullen, USACE
Amanda Martin	11.5	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	PJ Mion, USACE
Brendan McGuinness	11	Technical Lead	AECOM	Solonist Water Level Meter (2)	Paul Young, USACE
Nicole Schulman	11	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	11.5	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	11.5	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	11.5	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith Precious	8.75	Driller	NE Geotech	Direct Push Rig (2)	
Mike Podany	8.75	Driller	NE Geotech		
John Hudson	8	Veg Removal	CGE	Brush Hog Mower, Chain Saw	
Anthony Fiorintine	8	Veg Removal	CGE	Trimmer	
DAILY TOTAL	113				
TOTAL TO DATE	664.5	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech	None

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Soil Sampling

Geoprobe borings were completed and soil samples were collected at the following AOCs.
Background Location 01. Borings SB01 through SB04 (surface soil and subsurface soil) and SS05 through SS08 (surface soil only).
 Per RI WP, no temporary wells were set in Background location borings because no groundwater will be collected in Phase 1.
H-17. Borings SB01 through SB03, surface soil samples were collected. No groundwater was encountered - sandy lithology caused borholes to collapse after removing rod; therefore, boreholes could only be advanced to approximately 20 ft bgs.
 AECOM Geologist recommends returning with steel casing to advance borings to 35 ft bgs, and use DPT inside casing to obtain groundwater.

Groundwater Sampling

Temporary wells were reinstalled at H-12 (SB01), WDS-SB03, and WDS-SB24 to 15 ft bgs (5 ft deeper than original boring) with a 10-foot screen, in order to obtain sufficient groundwater to fill sample bottleware. All reinstalled wells had much greater recharge than the original temporary wells.
 After reinstallation of temporary wells, groundwater samples were collected at H12-SB01 (plus MS/MSD), WDS-SB23 (plus duplicate), and WDS-SB24.
 Additionally, PVC plugs were purchased to provide well caps for temporary wells.

UXO Anomaly Avoidance

UXO Anomaly Avoidance was performed at the following AOCs. All areas were cleared.

AST-35	H-2	Fuel Pump House and Distribution Line
Building 201	H-4	WDS-SB10
Building 203	H-6	WDS-SB12
Building 34	H-14	WDS-SB13
	H-17	WDS-SB19

Site Survey

The fuel pump house distribution line was further traced with a hand-held magnetometer. Hand digging along the distribution line from the pumphouse showed that the distribution line had been cut and removed after approximately 6-feet from the fuel house (see photograph below). Soil excavated from around the existing fuel line did not indicate noticeable staining or petroleum odor.

Vegetation Removal

AECOM directed vegetation clearing of AOCs at background sampling locations.

Flagging/Designation of Sample Locations

Brendan McGuinness (Technical Lead) flagged sample locations at AOCs H-2, H-4, H-5, H-6, H-14, H-15, H-21, H-35, and the fuel pump house, Former Building 34, and multiple locations of the site wide sanitary system.

Sample Management and Shipment

Soil and groundwater samples collected on Wednesday 6/8/2016 we Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Seven coolers were delivered to FedEx in East Hampton, NY, and shipped overnight to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/9/2016 Thursday

DR No. 10

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed borings and set temporary wells at Background 01 (SB01 through SB04) and AOC H-17 (SB01 through SB03). Additionally, Keith Precious purchased PVC caps as well covers. NE Geotech abandoned borings H12-SB01, WDS-SB23, and WDS-SB24.

Clean Globe Environment

CGE completed vegetation removal activities at Background Sampling locations.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

H-12: Due to the slow recharge of groundwater to temporary wells installed at H-12, two wells were redrilled and installed due to concerns of overnight rain infiltration through fill material at these locations which were screened within fill material.

FPH: After the Fuel Pump House distribution line was determined to be cut approximately 6 ft from the pump house, further borings which were scheduled as part of Phase 1 along the fuel distribution line area which was removed were suspended pending the results of initial borings near the fuel pump house.

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

New England Geotech needs to get an additional 20 ft of steel casing in order to complete borings to groundwater at location H-17. Also, NE Geotech needs to change decontamination water more often - muddy water was noticed by AECOM team members.

Superintendent (Signature):

Amanda Martin



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/9/2016 Thursday

DR No. 10

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

Daily Photos



Photo 1. The Fuel Pump House distribution was located with the magnetometer. Hand-digging indicated that the line had been cut and removed after approximately 6-feet from the fuel house.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/10/2016 Friday

DR No. 11 WRITTEN BY: Amanda Martin PROJECT NUMBER: 60443903

Weather: 75°F Sunny Days without a lost time injury: 11

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	11.5	SSHO	AECOM	YSI 6920 Water Level Meter (3)	PJ Mion, USACE
Amanda Martin	11.5	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	Paul Young, USACE
Nicole Schulman	11	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	11.5	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	11.5	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	11.5	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith Precious	8.5	Driller	NE Geotech	Direct Push Rig (2)	
Mike Podany	8.5	Driller	NE Geotech	Vegetation Removal Equipment:	
John	8	Veg Removal	CGE	Brush Hog	
Anthony	8	Veg Removal	CGE	Chain saw	
				Handsaw	
				Weed-Wacker	
DAILY TOTAL	101.5				
TOTAL TO DATE	765.5	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech	None
Clean Globe Environmental	

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Soil Sampling

Geoprobe borings were completed and soil samples were collected at the following AOCs.

Background Location 02. Borings SB01 through SB04 (surface soil and subsurface soil) and SS05 through SS08 (surface soil only). Surface and subsurface soil samples were collected for analysis of PAHs and metals. No temporary wells were set in Background location borings because background groundwater samples will not be collected in Phase 1, per the RI WP.

Background Location 03. Borings SB01 through SB04 (surface soil and subsurface soil) and SS05 through SS07 (surface soil only). Surface and subsurface soil samples were collected for analysis of PAHs and metals. No temporary wells were set in Background location borings because background groundwater samples will not be collected in Phase 1, per the RI WP.

Building F100C (UST 34). Borings SB01 and SB02 were completed. Four soil samples were collected per boring. Additional QC (DUP and MS/MSD) samples were collected. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

Groundwater Sampling

Groundwater samples were collected at AOC Suspected Tank B locations STB-SB01 (upgradient) and STB-SB03 (downgradient) for analysis of the NYSDEC STARS List for Fuel Oil VOCs and SVOCs. An MS/MSD sample was collected at STB-SB01. *Note that samples were only collected at two of the four temporary wells at AOC STB, a deviation from the RI WP because no tank was found to be in place, per discussion with Brendan McGuinness and PJ Mion on 6/8/2016. (See DR from 6/8/2016 for details).*

UXO Anomaly Avoidance

UXO Anomaly Avoidance was performed at the following AOCs. All areas were cleared.

BG02	H-21	F100C
BG03	EFO	WDS-SB01
P113	MP	WDS-SB02
H-15	H-16	WDS-SB03

Vegetation Removal

AECOM directed vegetation clearing of AOCs FPH, H-16, H-15, WDS (SB01 to SB03), and Building 203.

Flagging/Designation of Sample Locations

AECOM flagged sample locations at AOCs Plotting Room 113 and H-22. The team attempted (again) to locate AOC H-8 (identified in the Cashin Report) and could not locate it after over an hour of searching.

Sample Management and Shipment

Soil and groundwater samples collected on Thursday 6/9/2016 we Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Eight coolers were shipped overnight via FedEx for Saturday delivery to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

Site Management

AECOM developed a Field Tasks Tracking Sheet, organized by AOC, to better manage which tasks have and have not been completed. The tracking sheet will be updated daily and attached to the Daily Report.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/10/2016 Friday

DR No. 11 WRITTEN BY: Amanda Martin PROJECT NUMBER: 60443903

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed borings at locations Background 02 and Background 03 (SB01 through SB04). No temporary wells were set in background locations. NEG completed borings and installed temporary wells at AOC Building F100C (SB01 and SB02). Additionally, NEG abandoned borings WDS-SB22 and WDS-SB27.

Clean Globe Environment

CGE completed vegetation removal activities at AOCs FPH, H-16, H-15, WDS (SB01 to SB03), and Building 203.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

The AECOM Project Manager (Mark MacEwan) and Site Supervisor (Amanda Martin) discussed the necessity of installing the four piezometers in the vicinity of AOCs Fuel Pump Houst, AST-35, Building 201, and former Building 203. The purpose of these piezometers was to gauge water levels only; however, temporary wells are being installed in the same vicinity as the piezometers which will be sufficient for determining groundwater elevations. Therefore, the piezometers will not be installed.

Additionally, because groundwater elevation data cannot be determined without surveying the temporary wells, it was decided that all temporary wells should be left in place (not abandoned) during Phase 1 and be surveyed after the sampling event so that groundwater elevations throughout Camp Hero State Park could be determined. This information will be essential in deciding the placement of permanent monitoring wells, should that be necessary, during the Phase 2 field operations.

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

The team noted that the grass near Buildings 107, 201, and former 203 was very high and many team members had ticks crawling on their clothing after entering the area to locate nearby soil boring locations. As such, a request was made to Tom Dess (State Park Superintendent) to mow the lawn in the area, if possible. Mr. Dess indicated that the park management team intended to mow the area in the near future, but it was a low priority compared to other areas of the park. The area may or may not be mowed prior to AECOM working in the area, and AECOM may need to consider vegetation clearance (mowing the grass) in the area. The CGE vegetation removal crew did not have a lawn mower as part of their equipment; thus, mowing the grass in the area could not be completed on 6/10/16.

SITE OBSERVATIONS

AECOM attempted to locate H-8 for the third time this week (with the third group of people). Over eight team members have spent 8+ hours searching for H-8 to no avail. No further attempts will be made to locate H-8 and no samples will be collected associated with that AOC.

Superintendent (Signature):

Amanda Martin

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/10/2016**

AOC ID	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
B113	Battery 113	113-CC01								
		113-CC02								
		113-CC03								
		113-LC01 to LC03								
203	Former Building 203	203-SB01	BMG 6/9/16	NB 6/9/16						
		203-SB02	BMG 6/9/16	NB 6/9/16						
		203-SB03	BMG 6/9/16	NB 6/9/16						
		203-SB04	BMG 6/9/16	NB 6/9/16						
		203-SB05	BMG 6/9/16	NB 6/9/16						
2010	Building 2010 (UST 30)	2010-SB01	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16			
		2010-SB02	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16			
F100C	Building F100C (UST 34)	F100C-SB01	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16			
		F100C-SB02	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16			
AST35	AST 35/H-13	AST35-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016					
		AST35-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016					
		AST35-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016					
		AST35-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016					
FPH	Fuel Pump House and Distribution Line for AST-35	FPH-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16					
		FPH-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16					
		FPH-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16					
		FPH-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16					
STB	Building 22 (Tank B)	STB-SB01	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/10/16		
		STB-SB02	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16			
		STB-SB03	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/10/16		
		STB-SB04	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16			
		STB-SS05	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16			
		STB-SS06	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16			
		STB-SS07	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16			
3001	Building 3001	3001-MW01								
112	Battery 112 (UST 36, 37)	112-CC01								
		112-CC02								
		112-CC03								
107	Building 107	107-LC01								
201	Building 201	201-SB01	BMG 6/9/16	NB 6/9/16						
		201-WP01								
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		WDS-SB04								
		WDS-SB05								
		WDS-SB06								
		WDS-SB07	NS 6/10/16	NB 6/10/16						
		WDS-SB08								
		WDS-SB09	NS 6/10/16	NB 6/10/16						
		WDS-SB10	BMG 6/9/16	NB 6/9/16						
		WDS-SB11								
		WDS-SB12	BMG 6/9/16	NB 6/9/16						
		WDS-SB13	BMG 6/9/16	NB 6/9/16						
		WDS-SB14								
		WDS-SB15								
		WDS-SB16								
		WDS-SB17								
		WDS-SB18								
		WDS-SB19	BMG 6/9/16	NB 6/9/16						
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16		
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16		
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16	
		WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16	

Camp Hero Phase 1 RI Field Activities

Field Task Tracking Sheet

Last Updated: 6/10/2016

AOC ID	AOC Name	Location ID	Flagging	UXO Anomaly		Vegetation		Groundwater		CC, WP, LC Samples	GPS Coordinates
				Avoidance		Removal		Soil Boring	Soil Samples		
MP	Motor Pool	WDS-SB24	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16			
		WDS-SB25	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
		WDS-SB26	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
		WDS-SB27	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
		MP-SB01	BMG 6/9/16	NB 6/10/16	NA						
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA						
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA						
		MP-MW01									
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA						
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16							
		034-SS02	BMG 6/9/16	NB 6/9/16							
		034-SS03	BMG 6/9/16	NB 6/9/16							
		034-SS04	BMG 6/9/16	NB 6/9/16							
		034-SS05	BMG 6/9/16	NB 6/9/16							
H1	H-1	H1-SS01	NS/AM 6/6/16								
		H1-SS02	NS/AM 6/6/16								
		LC Samples	NS/AM 6/6/16								
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16							
		H2-SS02	BMG 6/9/16	NB 6/9/16							
		LC Samples	BMG 6/9/16	NB 6/9/16							
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16				
		H3-SS02	NS 6/6/16				MG/KP 6/7/16				
		LC Samples	NS 6/6/16							No Liquid Present	
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16							
		H4-SB02	BMG 6/9/16	NB 6/9/16							
		H4-SB03	BMG 6/9/16	NB 6/9/16							
H5	H-5	H5-SS01									
		H5-SS02									
		H5-SS03									
		H5-SS04									
		LC Samples									
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16							
		H6-SB02	BMG 6/9/16	NB 6/9/16							
		H6-SB03	BMG 6/9/16	NB 6/9/16							
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16				
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16				
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16			
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16			
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA						
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA						
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA						
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached			
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached			
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached			
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16						
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16						
		H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16						
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16							
		H18-SS02	BMG 6/7/16	NB 6/7/16							
		LC Samples	BMG 6/7/16	NB 6/7/16							
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA						
		H19-SS02	NS 6/6/16	NB 6/6/16	NA						
		H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16				

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/10/2016**

AOC ID	AOC Name	Location ID	Flagging	UXO Anomaly	Vegetation	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
				Avoidance	Removal					
H20	H-20	H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA					
		H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA					
		H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA					
H22	H-22	H22-SS01	NS 6/10/16							
		H22-SS02	NS 6/10/16							
		LC Samples	NS 6/10/16							
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA					
		P113-SB02	NS 6/10/16	NB 6/10/16	NA					
		P113-SB03	NS 6/10/16	NB 6/10/16	NA					
AGC3	Camp Hero State Park Bluffs	NA								
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG02	Background Samples	BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16					
BG04	Background Samples	BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16					

Note: The Field Task Tracking Sheet is still in development as of 6/10/2016 and will be further updated by the field crew and included in future Daily Reports.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/12/2016 Sunday

DR No. 12		WRITTEN BY: Amanda Martin		PROJECT NUMBER: 60443903	
Weather: 75°F Sunny		Days without a lost time injury: 12			
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	10.5	SSHO	AECOM	YSI 6920 Water Level Meter (3)	
Amanda Martin	10.5	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	
Nicole Schulman	10	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	10.5	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	10.5	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	10.5	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith Precious	8.5	Driller	NE Geotech	Direct Push Rig 6620 (Track)	
Mike Podany	8.5	Driller	NE Geotech	Direct Push Rig (Truck)	
John Hudson	8	Geologist	CGE		
DAILY TOTAL	87.5	765.5			
TOTAL TO DATE	853	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech	None
Clean Globe Environmental	

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Soil Sampling

Geoprobe borings were completed and soil samples were collected at the following AOCs.

AST35. Four borings (FPH-SB01 through FPH-SB04) were completed. Soil samples were collected for analysis of the NYSDEC STARs List for Fuel Oil VOCs and SVOCs. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

Fuel Pump House and Distribution Line (FPH). Four borings (FPH-SB01 through FPH-SB04) were completed. Soil samples were collected for analysis of the NYSDEC STARs List for Fuel Oil VOCs and SVOCs. Petroleum odor was noted at FPH-SB04 throughout the depth of the boring. Maximum PID reading was 203 PPM at 9 to 10 ft bgs. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

H-6. Three borings were completed (H6-SB01 through H6-SB03). Soil samples were collected for analysis of PCBs and lead. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

H-4. Three borings were completed (H4-SB01 through H4-SB03). Soil samples were collected for analysis of PCBs and lead. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

Waste Disposal System (WDS) - Site Wide. One boring was completed (WDS-SB10). Soil samples were collected for analysis of VOCs, SVOCs, PCBs, and metals. A temporary wells was installed in the boring; the team will return to collect a groundwater sample at a later date.

Plotting Room 113 (P113). Three borings were completed (P113-SB01 through P113-SB03). Soil samples were collected for the NYSDEC STARs List for Fuel Oil and Gasoline VOCs, SVOCs, and lead. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Note that depth to groundwater was very shallow (as shallow as 1 ft bgs) at FPH, AST35, P113, and H-6. Therefore, surface only one soil sample (0 - 1 ft bgs) was collected at some borings.

Groundwater Sampling

Groundwater samples were collected at the following AOCs.

Building F100C (UST 34). Two groundwater samples (from F100C-SB01 and F100C-SB02) were collected for analysis of lead.

Building 2010 (UST 30). One groundwater sample (from F100C-SB02) was collected for analysis of lead.

Waste Disposal System (WDS) - Site Wide. Two groundwater samples were collected from WDS-SB20 and WDS-SB21 for analysis of VOCs, SVOCs, PCBs, and metals. Sampling at WDS-SB20 was incomplete due to insufficient recharge in the well; the team will allow the well to recharge overnight and return the following morning to fill the remainder of the bottlware.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

UXO Anomaly Avoidance

No UXO Anomaly Avoidance was performed on 6/12/2016, as all areas where drilling occurred had been pre-cleared by the UXO Tech the previous week. However, the UXO Tech was present as an added safety precaution during drilling at AOC H-4 due to the presence of surface and potential subsurface debris. No debris was encountered in the borings.

Flagging/Designation of Sample Locations

AECOM flagged sample locations at AOCs WDS (SB14 through SB17).

Sample Management and Shipment

Soil and groundwater samples collected on Friday 6/10/16 and Sunday 6/12/2016 weew Quality Control-checked and recorded on Chain of Custody records. No coolers were shipped (FedEx closed on Sundays) but the coolers were prepared for packing and shipping on Monday 6/13/16.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/12/2016 Sunday

DR No. 12

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed borings at AOCs AST 35 (SB01 through SB04), FPH (SB01 through SB04), H-6 (SB01 through SB03), H-4 (SB01 through SB03), WDS (SB10), and Plotting Room 113 (SB01 through SB03). Additionally, NEG "shallow" soil borings at H-18 (SS01 through SS02) for the collection of surface and near-surface samples.

Clean Globe Environment

John Hudson (CGE) assisted Nicole Schulman (AECOM) with soil sampling and logging at AOCs FPH, H-6, H-4, and P113. Additionally, he assisted with sample QC and cooler packing.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

None

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

Poison ivy was noted to be prevalent at AOCs FPH, AST35, H-6, and P113. The team used caution to avoid the plants and discussed procedure for poison ivy treatment in case of exposure.

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

DATE: 6/12/2016 Sunday

DR No. 12

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

Daily Photos



Photo 1. AECOM performing PID screening of soil boring at AST35.



Photo 2. AECOM completing lithologic logging and sample collection from soil boring at AST 35.



Photo 3. New England Geotech collecting soil core at AST35 with Direct Push Geoprobe 6620.



Photo 4. AECOM and CGE completing lithologic logging and sample collection from soil boring at FPH.

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/12/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
B113	Battery 113	113-CC01								
		113-CC02								
		113-CC03								
		113-LC01 to LC03								
203	Former Building 203	203-SB01	BMG 6/9/16	NB 6/9/16						
		203-SB02	BMG 6/9/16	NB 6/9/16						
		203-SB03	BMG 6/9/16	NB 6/9/16						
		203-SB04	BMG 6/9/16	NB 6/9/16						
		203-SB05	BMG 6/9/16	NB 6/9/16						
2010	Building 2010 (UST 30)	2010-SB01	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	No Well		
		2010-SB02	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	KL 6/12/16		
F100C	Building F100C (UST 34)	F100C-SB01	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16		
		F100C-SB02	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16		
AST35	AST 35/H-13	AST35-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16			
		AST35-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16			
		AST35-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16			
		AST35-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16			
FPH	Fuel Pump House and Distribution Line for AST-35	FPH-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16			
		FPH-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16			
		FPH-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16			
		FPH-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16			
STB	Building 22 (Tank B)	STB-SB01	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/10/16		
		STB-SB02	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	No GW Sample		
		STB-SB03	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/10/16		
		STB-SB04	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	No GW Sample		
		STB-SS05	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16			
		STB-SS06	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16			
		STB-SS07	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16			
3001	Building 3001	3001-MW01								
112	Battery 112 (UST 36, 37)	112-CC01								
		112-CC02								
		112-CC03								
107	Building 107	107-LC01								
201	Building 201	201-SB01	BMG 6/9/16	NB 6/9/16						
		201-WP01								
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		WDS-SB04	NS 6/10/16							
		WDS-SB05	NS 6/10/16							
		WDS-SB06								
		WDS-SB07	NS 6/10/16	NB 6/10/16						
		WDS-SB08	BMG 6/9/16	NG 6/10/16						
		WDS-SB09	NS 6/10/16	NB 6/10/16						
		WDS-SB10	BMG 6/9/16	NB 6/9/16			MP/KP 6/12/16	MP/KP 6/12/16		
		WDS-SB11	AM 6/12/16							
		WDS-SB12	BMG 6/9/16	NB 6/9/16						
		WDS-SB13	BMG 6/9/16	NB 6/9/16						
		WDS-SB14	NS 6/12/16							
		WDS-SB15	NS 6/12/16							
		WDS-SB16	NS 6/12/16							
		WDS-SB17	NS 6/12/16							
		WDS-SB18	NS 6/6/16							
		WDS-SB19	NS 6/6/16	NB 6/9/16						
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16	
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16	
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16	
		WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16	
		WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16	
		WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/12/2016**

AOO	AOO Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates	
		WDS-SB26	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
		WDS-SB27	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA						
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA						
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA						
		MP-MW01									
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA						
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16							
		034-SS02	BMG 6/9/16	NB 6/9/16							
		034-SS03	BMG 6/9/16	NB 6/9/16							
		034-SS04	BMG 6/9/16	NB 6/9/16							
		034-SS05	BMG 6/9/16	NB 6/9/16							
H1	H-1	H1-SS01	NS/AM 6/6/16								
		H1-SS02	NS/AM 6/6/16								
		LC Samples	NS/AM 6/6/16								
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16							
		H2-SS02	BMG 6/9/16	NB 6/9/16							
		LC Samples	BMG 6/9/16	NB 6/9/16							
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16				
		H3-SS02	NS 6/6/16				MG/KP 6/7/16				
		LC Samples	NS 6/6/16						No Liquid Present		
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16				
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16				
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16				
H5	H-5	H5-SS01	BMG/NS 6/9/16								
		H5-SS02	BMG/NS 6/9/16								
		H5-SS03	BMG/NS 6/9/16								
		H5-SS04	BMG/NS 6/9/16								
		LC Samples	BMG/NS 6/9/16								
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16				
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16				
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16				
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16				
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16				
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16			
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16			
H14	H-14	H14-SB01	BMG 6/9/16	NB 6/9/16	NA						
		H14-SB02	BMG 6/9/16	NB 6/9/16	NA						
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA						
H15	H-15	H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
		H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
H16	H-16	H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16						
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached			
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached			
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached			
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16						
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16						
		H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16						
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16				
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16				
		LC Samples	BMG 6/7/16	NB 6/7/16							
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA						
		H19-SS02	NS 6/6/16	NB 6/6/16	NA						
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16				
		H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16				
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present		
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA						
		H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA						
		H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA						

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/12/2016

AOB	AOB Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H22	H-22	H22-SS01	NS 6/10/16							
		H22-SS02	NS 6/10/16							
		LC Samples	NS 6/10/16							
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16			
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
AGC3	Camp Hero State Park Bluffs	NA								
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16					

Note: Tasks completed on 6/12/16 are highlighted in green.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/13/2016 Sunday

DR No. 13		WRITTEN BY: Amanda Martin		PROJECT NUMBER: 60443903	
Weather: 75°F Sunny		Days without a lost time injury: 13			
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	11	SSHO	AECOM	YSI 6920 Water Level Meter (3)	
Amanda Martin	11	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	
Nicole Schulman	10.5	Geologist	AECOM	PID MiniRae 3000 (4)	
Mike Glinski	11	Geologist	AECOM	PID MiniRae 2000 (1)	
Katie Priess	11	Environmental Scientist	AECOM	MIE DR-4000 Dust Monitor (2)	
Nina Bennerson	11	UXO Tech II	AECOM	Shondstadt Magnetometer	
Keith Precious	8.5	Driller	NE Geotech	Direct Push Rig 6620 (Track)	
Mike Podany	8.5	Driller	NE Geotech	Direct Push Rig (Truck)	
John Hudson	10	Geologist	CGE		
DAILY TOTAL	92.5				
TOTAL TO DATE	947.5	<i>(on-site hours only)</i>			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech (NE Geotech)	None
Clean Globe Environmental (CGE)	

WORKED PERFORMED BY AECOM
The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day. John Schroeder arrived on-site for the first day and received UXO Anomaly Awareness Training and reviewed all applicable AHAs in the APP.

Soil Sampling
Geoprobe borings were completed and soil samples were collected at the following AOCs.

Motor Pool. Two borings (MP-SB02 and -SB03) were completed. Soil samples were collected for analysis of the NYSDEC STARs List for Fuel Oil VOCs and SVOCs, energetics, and PCBs. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date.

Engineering Field Office (EFO). One boring (EFO-SB01) was completed. Soil samples were collected for analysis of energetics. A temporary well was installed in the borings the team will return to collect the groundwater sample at a later date.

H-5. Four co-located sets of surface soil and near-surface soil samples were collected (H5-SS01 through H5-SS04). Soil samples at H5-SS01 and -SS02 were collected for analysis of VOCs, SVOCs, PCBs, and metals. Soil samples at H5-SS03 and -SS04 were collected for analysis of PCBs and lead.

H-14. Three borings were completed (H14-SB01 through H14-SB03). Soil samples were collected for analysis of PAHs and metals. Water was not encountered in H14-SB01; the team advanced the boring to 25 ft bgs (per the RI WP). The team will check to see if water has entered the boring the following morning. Temporary wells were installed in the borings; the team will return to collect groundwater samples at a later date. If no water has entered H14-SB01, an alternative plan will be discussed with the Technical Lead, Brendan McGuinness, and the USACE Geologist, PJ Mion.

H-16. One boring was completed (H16-SB01). Soil samples were collected for analysis of VOCs, SVOCs, PCBs, and metals. A temporary well was installed in the boring; the team will return to collect a groundwater sample at a later date.

Waste Disposal System (WDS) - Site Wide. Five borings were completed (WDS-SB08, -SB09, -SB11, -SB12, -SB13). Soil samples were collected for analysis of VOCs, SVOCs, PCBs, and metals. Temporary wells were installed in the borings; the team will return to collect a groundwater sample at a later date.

Former Building 34 (034). One boring (034-SB01) was completed. Soil samples were collected for analysis of PAHs, PCBs, and metals. Additionally, four co-located sets of surface soil and near-surface soil samples (034-SS02 through 034-SS05) were collected for the same analyses. A temporary well was installed in the boring; the team will return to collect a groundwater sample at a later date.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Groundwater Sampling
Groundwater samples were collected at the following AOCs.

Fuel Pump House (FPH). Three groundwater samples (from FPH-SB02, FPH-SB03, and FPH-SB04) were collected for analysis of VOCs and SVOCs. QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

UXO Anomaly Avoidance
No UXO Anomaly Avoidance was performed on 6/13/2016, as all areas where drilling occurred had been pre-cleared by the UXO Tech the previous week.

Flagging/Designation of Sample Locations
AECOM flagged sample locations at AOCs WDS (SB06 and SB07).

Sample Management and Shipment
Soil and groundwater samples collected on Sunday 6/12/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Additionally, the coolers which were prepared on Sunday 6/12/16 (samples from Friday 6/10/16) were packed for shipment. Eleven coolers were shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI) on Tuesday 6/14/16. Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/13/2016 Sunday

DR No. 13

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed 13 borings total between AOCs WDS, EFO, MP, H-16, Former Building 34, and H-14.

Additionally, NEG completed 8 "shallow" soil borings at former Building 34 and H-5 for the collection of surface and near-surface soil samples.

Clean Globe Environment

John Hudson (CGE) assisted Nicole Schulman (AECOM) with soil sampling and logging at AOCs WDS, EFO, MP, Former Building 34, and H-14.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Tom Dess, Camp Hero State Park Superintendent, was unaware that drilling was planned to occur inside the Motor Pool building adjacent to the former hydraulic lift. However, Mr. Dess indicated that it would not be a problem and that he would coordinate with the necessary employees to schedule the drilling inside the Motor Pool at 0900 on Tuesday 6/14/16.

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/14/2016 Tuesday

DR No. 14 WRITTEN BY: Amanda Martin PROJECT NUMBER: 60443903

Weather: 75°F Sunny Days without a lost time injury: 14

NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	10	SSHO	AECOM	YSI 6920 Water Level Meter (3)	PJ Mion, USACE
Amanda Martin	11	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	Greg Goepfert, USACE
Nicole Schulman	10	Geologist	AECOM	PID MiniRae 3000 (4)	
John Schroeder	11	Geologist	AECOM	PID MiniRae 2000 (1)	
Mike Glinski	11	Geologist	AECOM	MIE DR-4000 Dust Monitor (2)	
Katie Priess	11	Environmental Scientist	AECOM	Shondstadt Magnetometer	
Nina Bennerson	10	UXO Tech II	AECOM	Direct Push Rig 6620 (Track)	
Keith Precious	8	Driller	NE Geotech	Direct Push Rig (Truck)	
Mike Podany	8	Driller	NE Geotech		
John Hudson	10	Geologist	CGE		
DAILY TOTAL	100				
TOTAL TO DATE	1051.5	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech (NEG)	None
Clean Globe Environmental (CGE)	

WORKED PERFORMED BY AECOM
The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Soil Sampling
Geoprobe borings were completed and soil samples were collected at the following AOCs.
Motor Pool. One boring (MP-SB01) was completed. Soil samples were collected for analysis of the NYSDEC STARs List for Fuel Oil VOCs and SVOCs. A temporary well was installed in the boring; the team returned in the afternoon to collect a groundwater sample (details below).
H-21. Three borings were completed (H21-SB01 through H21-SB03). Soil samples were collected for analysis of VOCs, SVOCs, PCBs, and metals. Temporary wells were installed in the borings; the team will return to collect a groundwater samples at a later date.
Waste Disposal System (WDS) - Site Wide. Nine borings were completed (WDS-SB01, -SB02, -SB03, -SB06, -SB07, -SB14, -SB15, -SB16, and -SB17). Soil samples were collected for analysis of VOCs, SVOCs, PCBs, and metals. Temporary wells were installed in the boring; the team will return to collect groundwater samples at a later date. Additionally, soil samples at WDS-SB04 and -SB05 were collected via hand auger for the same analyses.
 QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Groundwater Sampling
Groundwater samples were collected at the following AOCs.
AST-35. Three groundwater samples were collected from temporary wells at borings AST35-SB02, -SB03, and -SB04 for analysis of VOCs and SVOCs. The team attempted to collect a sample from AST35-SB01; however, recharge in the well was insufficient to fill the bottle. AST35-SB01 was installed to approximately 10 ft bgs with a 5-foot screen; the team will install a new temporary well at this location on 6/15/16 to 15 ft bgs with a 10-foot screen, in attempt to collect sufficient water.
Motor Pool (MP). The team attempted to collect a groundwater sample from MP-SB01. However, recharge in the well was insufficient to fill the bottle (the well produced less than 500 mL after a couple hours worth of pumping then pausing to recharge). The team will reassess the volume of water in the temporary well on 6/15/16; if there is still insufficient water to complete sample collection, the team will discuss how to proceed with the technical lead, Brendan McGuinness.
 QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

UXO Anomaly Avoidance
UXO Anomaly Avoidance was performed at WDS-SB06, -SB07, -SB14, -SB15, -SB16, and -SB17. All areas were cleared.

Flagging/Designation of Sample Locations
AECOM adjusted flagged sample locations at AOC WDS (-SB06, -SB07, and -SB14) once the UXO Tech cleared the areas. Underground anomalies (non-UXO) were identified near both -SB06/-SB07 and -SB14. Near -SB06 and -SB07, a large anomaly was identified by the UXO Tech on the north side of Coast Artillery Road where the historic maps of the Site-Wide Sanitary Sewer indicate a 90-degree turn in the sewer line. Two shallow holes were dug and a portion of a concrete pad was exposed. The WDS-SB06 and -SB07 borings were placed upgradient and downgradient of the concrete pad.
 Additionally, historic pipes were found underground in the vicinity of WDS-SB14. The UXO Tech identified a large anomaly in the woods which connected to the pipes (per magnetometer readings); the team believes the anomaly may be the historic septic tank indicated on the Site-Wide Sanitary Sewer maps. WDS-SB14 was located adjacent to the anomaly area in a spot cleared by the UXO Tech.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/14/2016 Tuesday

DR No. 14

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORKED PERFORMED BY AECOM (continued)

Sample Management and Shipment

Soil and groundwater samples collected on Monday 6/13/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Seven coolers were shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI) on Tuesday 6/14/16. Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

RTI Laboratories notified the team that one of the coolers shipped on Thursday 6/9/16 for delivery on 6/10/16 was delivered by FedEx four days late on 6/14/16. The cooler was out of temperature at 21.6°C. The cooler contained SVOC, PCB, and lead samples at AOCs Suspected Tank B (STB), Building 2010, and WDS (-SB20). As a result, the team will need to recollect soil samples at these locations.

The project chemist (Devon Chicoine) discussed confirmation of sample receipt with RTI laboratories; in the future, the team will be notified daily if samples are not received.

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed 13 borings total between AOCs WDS, MP, and H-21.

Clean Globe Environment

John Hudson (CGE) assisted Nicole Schulman (AECOM) with soil sampling and logging at AOCs WDS, MP, and H-21.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

The AECOM Technical Lead (Brendan McGuinness), USACE Geologist (PJ Mion), and Site Supervisor (Amanda Martin) discussed the following concerns:

AST35. There was insufficient recharge in temporary well AST35-SB01. The approach described in the Groundwater Sampling section of this Daily Report (see above) was agreed upon as the best approach to retrieve sufficient sample volume.

H-14. No water entered H14-SB01 overnight from 6/13/16 to 6/14/16 (the temporary well was installed to 25 ft bgs on 6/13/16). Because groundwater is present in the other two temporary wells at H-14 (-SB02 and -SB03) for sample collection, H14-SB01 will not be advanced to a greater depth in attempt to find groundwater.

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/14/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates	
B113	Battery 113	113-CC01									
		113-CC02									
		113-CC03									
		113-LC01 to LC03									
203	Former Building 203	203-SB01	BMG 6/9/16	NB 6/9/16							
		203-SB02	BMG 6/9/16	NB 6/9/16							
		203-SB03	BMG 6/9/16	NB 6/9/16							
		203-SB04	BMG 6/9/16	NB 6/9/16							
		203-SB05	BMG 6/9/16	NB 6/9/16							
2010	Building 2010 (UST 30)	2010-SB01	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	No Well			
		2010-SB02	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	KL 6/12/16			
F100C	Building F100C (UST 34)	F100C-SB01	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16			
		F100C-SB02	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16			
AST35	AST 35/H-13	AST35-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16				
		AST35-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16			
		AST35-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16			
		AST35-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16			
		PZ-1	BMG 6/9/16	NB 6/9/16							
		PZ-2	BMG 6/9/16	NB 6/9/16							
FPH	Fuel Pump House and Distribution Line for AST-35	FPH-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL 6/14/16			
		FPH-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16			
		FPH-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16			
		FPH-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16			
STB	Building 22 (Tank B)	STB-SB01	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/10/16			
		STB-SB02	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	No GW Sample			
		STB-SB03	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/10/16			
		STB-SB04	BMG 6/7/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	No GW Sample			
		STB-SS05	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16				
		STB-SS06	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16				
		STB-SS07	BMG 6/7/16	NB 6/7/16	NA		MG 6/8/16				
3001	Building 3001	3001-MW01									
112	Battery 112 (UST 36, 37)	112-CC01									
		112-CC02									
		112-CC03									
107	Building 107	107-LC01									
201	Building 201	201-SB01	BMG 6/9/16	NB 6/9/16							
		201-WP01									
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16				
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16				
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16				
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16				
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16				
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16				
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16				
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16				
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16				
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16				
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB18	NS 6/6/16	NB 6/14/16							
		WDS-SB19	NS 6/6/16	NB 6/9/16							
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/12/16			
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16			
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16			

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/14/2016**

AOO	AOO Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
		WDS-SB23	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		
		WDS-SB24	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16		
		WDS-SB25	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		WDS-SB26	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		WDS-SB27	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		MP-MW01								
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16			
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16			
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
H1	H-1	H1-SS01	NS/AM 6/6/16							
		H1-SS02	NS/AM 6/6/16							
		LC Samples	NS/AM 6/6/16							
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16						
		H2-SS02	BMG 6/9/16	NB 6/9/16						
		LC Samples	BMG 6/9/16	NB 6/9/16						
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16			
		H3-SS02	NS 6/6/16				MG/KP 6/7/16			
		LC Samples	NS 6/6/16						No Liquid Present	
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16			
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16			
		LC Samples	BMG/NS 6/9/16							
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16			
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16			
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16			
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16			
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16					
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16			
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16					
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16					
		H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16					
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		LC Samples	BMG 6/7/16	NB 6/7/16						
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA					
		H19-SS02	NS 6/6/16	NB 6/6/16	NA					
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/14/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
		H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16			
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
H22	H-22	H22-SS01	NS 6/10/16							
		H22-SS02	NS 6/10/16							
		LC Samples	NS 6/10/16							
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16			
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
AGC3	Camp Hero State Park Bluffs	NA								
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16					
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16					

Note - Items highlighted in green were completed on 6/14/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/15/2016 Wednesday

DR No. 15		WRITTEN BY: Amanda Martin			PROJECT NUMBER: 60443903	
Weather: 75°F Sunny		Days without a lost time injury: 15				
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:	
Greta White	10.25	Alternate SSHO	AECOM		PJ Mion, USACE	
Amanda Martin	11	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	Greg Goepfert, USACE	
Nicole Schulman	9.5	Geologist	AECOM	PID MiniRae 3000 (4)		
John Schroeder	10.25	Geologist	AECOM	PID MiniRae 2000 (1)		
Mike Glinski	10.25	Geologist	AECOM	MIE DR-4000 Dust Monitor (2)		
Katie Priess	10.25	Environmental Scientist	AECOM	Shondstadt Magnetometer		
Nina Bennerson	9.5	UXO Tech II	AECOM	Direct Push Rig 6620 (Track)		
Keith Precious	8.5	Driller	NE Geotech	Direct Push Rig (Truck)		
Mike Podany	8.5	Driller	NE Geotech			
John Hudson	9.5	Geologist	CGE			
DAILY TOTAL	107.5					
TOTAL TO DATE	1159	(on-site hours only)				

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
New England Geotech (NEG)	None
Clean Globe Environmental (CGE)	

WORKED PERFORMED BY AECOM
 The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day. Greta White arrived on site to replace Kelly Lurie as the SSHO. Ms. White reviewed and signed all applicable AHAs in the on-site APP.

Soil Sampling
 Samples were recollected from the following locations. Note: Due to the delay of the FEDEX shipment of the samples collected on 6/8/16 (see details in the Daily Report from 6/14/16), some locations were resampled.

New geoprobe borings were completed and soil samples were collected.
Former Building 2010 (UST 30). Two soil borings were completed (2010-SB01 and -SB02):
 - At 2010-SB01: four soil samples were collected (0 - 4, 4 - 5, 5 - 6, 6 - 7 ft bgs) for lead analysis only. One MS/MSD sample was collected at 2010-SB02-04.
 - At 2010-SB02: four soil samples were collected (0 - 4, 4 - 5, 5 - 6, 6 - 7 ft bgs) for lead analysis only. Two duplicate samples were collected at 2010-SB02-04 and 2010-SB02-05.
Site-Wide Waste Disposal System (WDS). One soil boring was completed (SB20). One soil sample was collected from 5 - 6 ft bgs for analysis of VOCs, SVOCs/PAHs, PCBs, and metals.
Suspected Tank B (STB). Four borings were completed at STB (SB01 through SB04). Only one subsurface soil sample was collected from each boring at the water table. Three additional surface soil samples were collected via hand-auger (SS05 through SS07). Samples were collected for analysis of NYSDEC STARs fuel oil list VOCs and SVOCs.

Geoprobe borings and soil sample collection was completed at the following AOCs.
Background Location 04. Four borings (BG04-SB01 through -SB04) and three additional surface soil locations (-SS05 through -SS07) were completed. Surface and subsurface soil samples were collected for analysis of PAHs and metals. No temporary wells were set in Background location borings because background groundwater samples will not be collected in Phase 1, per the RI WP.
H-1. Two surface soil locations (H1-SS01 and H1-SS02) were completed via hand-auger. One surface soil and one near-surface soil sample was collected per location for analysis of VOCs, SVOCs, PCBs, and metals.
H-2. Two surface soil locations (H2-SS01 and H2-SS02) were completed via hand-auger. One surface soil and one near-surface soil sample was collected per location for analysis of VOCs, SVOCs, PCBs, and metals.
H-15. Three borings (H15-SB01 through -SB03) were completed. Soil samples were collected for analysis of PAHs and metals. No groundwater was encountered in the borings; the borings were advanced to 25 ft bgs (per the RI WP) and a temporary well was installed. The temporary wells will be gauged at a later date to see if groundwater has entered the boring; if no groundwater is present, no samples will be collected (per the RI WP).
H-19. Two surface soil locations (H22-SS01 and H22-SS02) were completed via disposable scoop. Samples were collected for analysis of VOCs, PAHs, and metals. The surface soil at the two locations was screened using the PID bag-headspace test. The PID reading at both locations was 0.0 PPM; therefore, no geoprobe borings/subsurface soil sampling will be completed at H-19, per the RI WP.
H-22. Two surface soil locations (H22-SS01 and H22-SS02) were completed via hand-auger. One surface soil and one near-surface soil sample was collected per location for analysis of VOCs, SVOCs, PCBs, and metals.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Replacement Well
 A replacement well was installed at AST35-SB01 to 15 ft bgs with a 10-foot screen. The original temporary well was installed to approximately 10 ft bgs with a 5-foot screen; however, the well did not produce sufficient sample volume after multiple attempts to collect a sample.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/15/2016 Wednesday

DR No. 15 | **WRITTEN BY:** Amanda Martin | **PROJECT NUMBER:** 60443903

WORKED PERFORMED BY AECOM (continued)

Groundwater Sampling

Groundwater samples were collected at the following AOCs.

H-4. Three groundwater samples were collected from temporary wells at borings H4-SB01, -SB02, and -SB03 for analysis of PCBs and metals.

H-6. Three groundwater samples were collected from temporary wells at borings H6-SB01, -SB02, and -SB03 for analysis of PCBs and metals.

Waste Disposal System (WDS) - Site Wide. The team attempted to collect a groundwater sample from WDS-SB10. Recharge is the well was insufficient to fill all sample bottleware. One additional attempt will be made to finalize the sample on 6/16/16. If insufficient sample volume is retrieved, the volume collected will be sent to the lab and no additional attempts will be made.

Motor Pool (MP). The team attempted to collect a groundwater sample from MP-SB01 twice (once in the morning and once in the evening). These were the second and third attempts to fill the bottleware. Again, insufficient water was present in the well to fill the remaining bottleware. One additional attempt will be made to finalize the sample on 6/16/16. If insufficient sample volume is retrieved, the volume collected will be sent to the lab and no additional attempts will be made.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Sample Management and Shipment

Soil and groundwater samples collected on Tuesday 6/14/16 and Wednesday 6/15/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Six coolers were shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed 14 borings total between Background 04 and AOCs STB, Building 2010, WDS (-SB20), and H-15.

Clean Globe Environment

John Hudson (CGE) assisted Nicole Schulman (AECOM) with soil sampling and logging at AOCs H-1, H-2, H-19, H-22, and H-15.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Mr. Greg Goepfert (USACE Project Manager) was on site and discussed concerns with Amanda Martin (Site Supervisor). Mr. Goepfert requested that Tom Dess (NY State Parks Superintendent) was notified each morning of the project team's presence on site, along with the number of team members present.

Additionally, Mr. Goepfert requested that AECOM provide secondary containment for the cans found in Building 10 (Kitchen) and dispose of the containers, in the instance that Tom Dess cannot dispose of them. Mr. Goepfert indicated that he would discuss possible disposal by the Parks Service with Tom Dess, since the items appear to be general consumer items (oil cans, paint cans) and the Parks Service has a maintenance building at Camp Hero.

Tom Dess (NY State Parks Superintendent) was notified in the morning that 12 team members were on site (including USACE, AECOM, CGE, and NEG). Mr. Dess also inquired about weekend work and was reassured that, per previous site meetings and discussion, no weekend work took place in the picnic area where camping occurred over the weekend. Mr. Dess was also concerned that the drill rig had left track marks in the woods near Background Location 01.

Ms. Martin informed Mr. Dess that track marks were an unfortunate result of collecting soil samples with a drill rig; Mr. Dess indicated that the Park Maintenance would place a log at the entrance to the area so the public would be aware that the track marks were not a public access road. Additionally, Mr. Dess requested 2-days notice prior to when AECOM wants to perform sampling inside of Battery 113.

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/15/2016 Wednesday

DR No. 15

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/15/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16			
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16			
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16			
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16			
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16			
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16			
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB18	NS 6/6/16	NB 6/14/16		NYSP 6/15/16				
		WDS-SB19	NS 6/6/16	NB 6/9/16		NYSP 6/15/16				
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16	
WDS-SB20 - REDO					MG/KP 6/15/16	MG/KP 6/15/16				
WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16			
WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16			
WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16			
WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16			
WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
WDS-SB26	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		MP-MW01								
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16			
034	Former Building 34	034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16			
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		H1	H-1	H1-SS01	NS/AM 6/6/16			NS/JH 6/15/16		
H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16					
LC Samples	NS/AM 6/6/16									
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			
		H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			
		LC Samples	BMG 6/9/16	NB 6/9/16						
H3	H-3	H3-SS01	NS 6/6/16			MG/KP 6/7/16				
		H3-SS02	NS 6/6/16			MG/KP 6/7/16				
		LC Samples	NS 6/6/16							No Liquid Present
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16			
		LC Samples	BMG/NS 6/9/16							
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/15/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16			
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16			
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16			
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16			
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16			
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16			
H16	H-16	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
H17	H-17	H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16					
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16					
		H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16					
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		LC Samples	BMG 6/7/16	NB 6/7/16						
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
		H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
		H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16			
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
H22	H-22	H22-SS01	NS 6/10/16				NS/JH 6/15/16			
		H22-SS02	NS 6/10/16				NS/JH 6/15/16			
		LC Samples	NS 6/10/16							
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16			
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
AGC3	Camp Hero State Park Bluffs	NA								
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/15/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			

Note - Items highlighted in green were completed on 6/15/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/16/2016 Thursday

DR No. 16		WRITTEN BY: Amanda Martin		PROJECT NUMBER: 60443903	
Weather: 75°F Morning Clouds, Afternoon Sun		Days without a lost time injury: 16			
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Greta White	10.25	Alternate SSHO	AECOM		PJ Mion, USACE
Amanda Martin	10.75	Site Supervisor	AECOM	GeoTech Peristaltic Pump (1)	
Nicole Schulman	10.25	Geologist	AECOM	PID MiniRae 3000 (4)	
John Schroeder	10.75	Geologist	AECOM	PID MiniRae 2000 (1)	
Mike Glinski	10.75	Geologist	AECOM	MIE DR-4000 Dust Monitor (2)	
Katie Priess	10.75	Environmental Scientist	AECOM	Shondstadt Magnetometer	
Nina Bennerson	10.25	UXO Tech II	AECOM	Direct Push Rig 6620 (Track)	
Keith Precious	9	Driller	NE Geotech	Direct Push Rig (Truck)	
Mike Podany	9	Driller	NE Geotech		
John Hudson	10	Geologist	CGE		
DAILY TOTAL	111.75				
TOTAL TO DATE	1270.75	(on-site hours only)			

SUBCONTRACTORS:		SITE DELIVERIES (indicate size, type, and condition):			
New England Geotech (NEG)		None			
Clean Globe Environmental (CGE)					

WORKED PERFORMED BY AECOM
The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Soil Sampling
Geoprobe borings and soil sample collection was completed at the following AOCs.

Former Building 203. Five borings (203-SB01 through -SB05) were completed. Two soil samples were collected per boring for analyses of VOCs, SVOCs, PCBs, and metals. No water was encountered in any of the borings; a dense clay layer was encountered between 2 and 22 ft bgs. Elevated PID readings were observed in two borings. Details of each boring are provided below.

- SB01: Boring was advanced to 25 ft bgs. No water was encountered; the clay layer was encountered at 13 ft bgs. A temporary well was installed to 25 ft bgs with a 10-foot screen.
- SB02: Boring was advanced to 25 ft bgs. No water was encountered; the clay layer was encountered at 2 ft bgs. A temporary well was installed to 25 ft bgs with a 10-foot screen.
- SB03: Boring was advanced to 25 ft bgs. No water was encountered; the clay layer was encountered at 5 ft bgs. A temporary well was installed to 25 ft bgs with a 10-foot screen.
- SB04: Boring was advanced to 25 ft bgs. No water was encountered; the clay layer was encountered at 14 ft bgs. A PID reading of 11.3 PPM was observed at approximately 11 ft bgs in the sandy silt layer just above the clay, which was the assumed transmissive zone. A temporary well was installed to 25 ft bgs with a 10-foot screen.
- SB05: Boring was advanced to approximately 22 ft bgs. No water was encountered; the clay layer was encountered at 22 ft bgs. A PID reading of 402.8 PPM was observed at 21 ft bgs, just above the clay layer in a sandy silt (the assumed transmissive zone). One soil sample was collected from this interval. A temporary well was installed to 22 ft bgs with a 10-foot screen.

The team will return at a later date to determine if water is present in the temporary wells; if present, a groundwater sample will be collected.

Building 201 (Radar Tower). One boring (201-SB01) was advanced to 25 ft bgs. No water was encountered; the clay layer encountered in nearby borings at former Building 203 was also not encountered. A temporary well was installed to 25 ft bgs with a 10-foot screen; the team will return at a later date to see if water is present in the well.

Site-Wide Waste Disposal System (WDS). Two borings (WDS-SB18 and -SB19) were completed. Soil samples were collected for analysis of VOCs, SVOCs, PCBs, and metals. No water was encountered in WDS-SB18; the boring was advanced to 25 ft bgs and a temporary well was installed with a 15-foot screen. The team will return at a later date to see if water is present in the wells. Water was encountered at WDS-SB19 at 13.5 ft bgs; a temporary well was installed to 20 ft bgs with a 10-foot screen. A groundwater sample will be collected at a later date.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

The soil borings and soil sampling completed on 6/16/16 finished the remaining soil sampling planned for the Phase 1 RI field effort. As such, New England Geotech demobilized from the site.

UXO Anomaly Avoidance
PZ-1 was relocated because the Geoprobe hit refusal at 6 ft bgs after three attempts at the original PZ-1 location. The relocated PZ-1 was cleared by the Nina Bennerson (AECOM UXO Tech II) prior to drilling. The magnetometer indicated multiple large hits in the area of the original PZ-1 location; the team suspects that the foundation from former Building 203 may still be in place and contain rebar.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/16/2016 Thursday

DR No. 16

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORKED PERFORMED BY AECOM (continued)

Replacement Well

A replacement well was installed at H14-SB02 to 24 ft bgs with a 15-foot screen. The original temporary well was installed to 15 ft bgs; however, the well was dry after 24 hrs, so the team decided to reinstall the temporary well to greater depth in attempt to obtain a groundwater sample.

Piezometer Installation

Three piezometers (PZ-1, PZ-2, PZ-3) were installed near Building 203. All three borings were advanced to 25 ft bgs with a 15-foot screen. All three borings were dry and a dense clay layer was encountered, so the team is unsure of whether water will enter the piezometers. The team will return at a later date to see if water is present in the boring and to collect water level measurements.

Groundwater Sampling

Groundwater samples were collected at the following AOCs.

AST-35. One groundwater sample was collected from the replacement temporary well at AST35-SB01 for analysis of VOCs and SVOCs.

Plotting Room 113 (P113). One complete groundwater sample was collected from P113-SB02 for analysis of VOCs, SVOCs, and metals. Two partial samples were collected from P113-SB01 and P113-SB02; the recharge in the well was insufficient to fill all sample bottle/ware. The team will attempt to fill the remaining bottle/ware on 6/17/16; if recharge is still insufficient, no further attempts will be made.

Waste Disposal System (WDS) - Site Wide. Three groundwater samples were collected at WDS-SB01, -SB02, and -SB03 near the chlorine contact chamber for analysis of VOCs, SVOCs, PCBs, and metals. Additionally, the groundwater sample from WDS-SB10 was finalized.

Motor Pool (MP). The team finalized the groundwater sample from MP-SB01 and was able to collect sufficient sample volume (this was the fourth attempt). Additionally, the team assessed the existing well outside of the Motor Pool building (named MP-MW01 for the Phase 1 RI Work). Water from the well is used for non-potable purposes inside the motor pool building. The system was visually surveyed by J Schroeder, A Martin, and PJ Mion. No existing tap is available for water collection prior to the water entering a permanent filtration system. The team decided the best course of action is sampling directly from the well; however, depth to water was 50 ft bgs and the peristaltic pump could not retrieve water from that depth. The team will reassess how to collect a sample from MP-MW01 at a later date.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Building Access Assessment

Greta White (AECOM SSHO) and Amanda Martin (AECOM Site Supervisor) assessed access to Buildings 107 (Electrical Substation) and 201 (Radar Tower).

Building 107 (Electrical Substation). Access to Building 107 had an available entrance and appears to be safe from the outside. Tom Dess (NYS Parks Superintendent) was contacted about access to Building 107; Mr. Dess indicated that the building is concrete below the First Floor (which is wooden) and that the structure should be stable. The team has permission to enter from Mr. Dess. The team will attempt to enter the building at a later date to see if fluid is present in transformer in the basement.

Building 201 (Radar Tower) – Ms. Martin and Ms. White saw no available entrances to Building 201 other than breaking into the building at previously-sealed entrances. Mr. Dess was contacted about access; Mr. Dess that he was not aware that the team needed to enter the Radar Tower. He indicated that the building is completely sealed; the structures and stairwells inside are not stable; and he does not believe it is safe for anyone to enter. AECOM/USACE has permission to break into the building, if absolutely essential, at our own risk; however, Mr Dess indicated that USACE/AECOM would be responsible for re-sealing the entrance. Accessing Building 201 will be discussed with the Project Manager (Mark MacEwan) before the team proceeds.

Sample Management and Shipment

Soil and groundwater samples collected on Wednesday 6/15/16 and Thursday 6/16/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Six coolers were shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

The RTI Laboratories Project Manager (Kathy Griffin) contacted AECOM at 11 AM on 6/16/16 that one of the 6 coolers shipped on 6/15/15 had not yet arrived. Ms. Griffin tracked the package and indicated the cooler was scheduled to arrive at 3:00 PM on 6/16/16. However, a call from Ms. Griffin at 7:30 PM indicated that FedEx did not deliver the cooler in the afternoon; the latest tracking information indicates the cooler will arrive by 10:30 AM on 6/17/17.

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed 15 borings total between AOCs former Building 203 and associated piezometers, Building 201, WDS (-SB18 and -SB19), H-17, and one replacement well at H-14 (H14-SB02). NEG completed all borings needed for the Phase 1 RI field effort and demobilized from the site. However, NEG was contacted once AECOM received notice of the delayed cooler and agreed to have one driller return to the site on 6/17/16, in case resampling was necessary.

Clean Globe Environment

John Hudson (CGE) assisted Nicole Schulman (AECOM) with soil sampling and logging at AOCs former Building 203 and WDS. Additionally, he collected groundwater samples at AOC WDS (-SB01 through -SB03) and assisted with coordination for surveying by CGE the week of 6/20/16 and providing supplies for breaking into Battery 113 (to be provided by other CGE employees on Monday 6/20/16).



United States Army Corps of Engineers
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Montauk, New York

Contractor Daily Reports

DATE: 6/16/2016 Thursday

DR No. 16

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Tom Dess (NY State Parks Superintendent) was notified in the morning that 11 team members were on site (including USACE, AECOM, CGE, and NEG). Additionally, Amanda Martin (AECOM Site Supervisor) asked Mr. Dess if Monday 6/20/16 or Tuesday 6/21/16 would be preferable to the NYS Parks for the Battery 113 work. Mr. Dess indicated that Monday 6/20/16 would be preferable; the Battery 113 work was scheduled for Monday Morning 6/20/16. Mr. Dess will have maintenance staff repair the break-in once sample collection is complete.

Additionally, access to Buildings 107 (Electrical Substation) and 201 (Radar Tower) was discussed with Mr. Dess (see "Building Access Assessment" section above). Mr. Dess believes it is not safe to work near the radar tower due to large, sharp pieces of metal falling off the radar tower. Ms. Martin explained that the team had been previously instructed to wear hardhats at all times near the radar tower, avoid the area on windy days, and use a "spotter" to check for loose/moving metal pieces.

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

While working near the Radar Tower, the team wore hardhats at all times and used a "spotter" to check for loose/moving metal pieces. There was little to no wind during the time working near the radar tower; if the wind had increased, the team would have avoided working near the Radar Tower until conditions were safe.

Some team members elected to wear tyvek suits for tick protection while working near the Radar Tower and former Building 203, as many ticks were noticed in the area during flagging and other previous activities.

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/16/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16	NS/JH 6/16/16		
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16			
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16			
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16			
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16			
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16			
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16			
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB18	NS 6/6/16	NB 6/14/16		NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16		
		WDS-SB19	NS 6/6/16	NB 6/9/16		NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16		
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16	
WDS-SB20 - REDO					MG/KP 6/15/16	MG/KP 6/15/16				
WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16			
WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16			
WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16			
WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16			
WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
WDS-SB26	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	JS 6/16/16		
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		MP-MW01								
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
		034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16			
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16			
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16					
H1	H-1	H1-SS01	NS/AM 6/6/16				NS/JH 6/15/16			
		H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16			
		LC Samples	NS/AM 6/6/16							
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			
		H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			
		LC Samples	BMG 6/9/16	NB 6/9/16						
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16			
		H3-SS02	NS 6/6/16				MG/KP 6/7/16			
		LC Samples	NS 6/6/16							
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16			
		LC Samples	BMG/NS 6/9/16							
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/16/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16			
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16			
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16			
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16			
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16			
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16			
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16			
H16	H-16	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
H17	H-17	H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
		H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
		H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
H18	H-18	LC Samples	BMG 6/7/16	NB 6/7/16						
		H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
		H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
		H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16			
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
H22	H-22	H22-SS01	NS 6/10/16				NS/JH 6/15/16			
		H22-SS02	NS 6/10/16				NS/JH 6/15/16			
		LC Samples	NS 6/10/16							
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16			
AGC3	Camp Hero State Park Bluffs	NA								
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/16/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			

Note - Items highlighted in green were completed on 6/16/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/17/2016 Friday

DR No. 16		WRITTEN BY: Amanda Martin			PROJECT NUMBER: 60443903	
Weather: 75°F Morning Clouds, Afternoon Sun		Days without a lost time injury: 17				
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:	
Greta White	10.25	Alternate SSHO	AECOM	YSI 6920 Water Level Meter (3)	PJ Mion, USACE	
Amanda Martin	10.25	Site Supervisor	AECOM	GeoTech Peristaltic Pump (3)		
Nicole Schulman	9	Geologist	AECOM	PID MiniRae 3000 (4)		
John Schroeder	10.25	Geologist	AECOM	PID MiniRae 2000 (1)		
Mike Glinski	10.25	Geologist	AECOM	MIE DR-4000 Dust Monitor (2)		
Katie Priess	10.25	Environmental Scientist	AECOM	Shondstadt Magnetometer		
Nina Bennerson	10.25	UXO Tech II	AECOM	Direct Push Rig 6620 (Track)		
Mike Podany	2	Driller	NE Geotech			
John Hudson	9	Geologist	CGE			
DAILY TOTAL	91.5					
TOTAL TO DATE	1353.25	(on-site hours only)				

SUBCONTRACTORS:		SITE DELIVERIES (indicate size, type, and condition):	
New England Geotech (NEG)		None	
Clean Globe Environmental (CGE)			

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Geoprobe Borings

The RTI Laboratories Project Manager (Kathy Griffin) notified AECOM on 6/16/16 that one of the 6 coolers shipped on 6/15/15 had not yet arrived (see Daily Report from 6/16/16 and below Sample Management section for details). While pending arrival of the cooler at the laboratory, geoprobe borings were advanced at the following locations for the collection of soil to be held for sampling, if resampling were required. The team was unable to wait for the cooler to arrive to decide whether to conduct the borings, as New England Geotech (NEG) had to demobilize from the site by 0900.

Former Building 2010 (UST 30). Two soil borings were completed (2010-SB01 and -SB02).

Site-Wide Waste Disposal System (WDS). One soil boring was completed (SB20).

Suspected Tank B (STB). Four borings were completed at STB (SB01 through SB04).

However, the cooler arrived at the laboratory below the required preservative temperature and resampling was not necessary. The soil was returned to the borings.

The soil borings and soil sampling completed on 6/16/16 finished the remaining soil sampling planned for the Phase 1 RI field effort. As such, New England Geotech demobilized from the site.

Groundwater Sampling

Groundwater samples were collected at the following AOCs.

Plotting Room 113 (P113). The collection of two groundwater samples at P113 was finalized (P113-SB01 and P113-SB02); the recharge in the well was insufficient to fill all sample bottleware on 6/16/16. Samples were collected for analysis of VOCs, SVOCs, and metals. However, groundwater had not recharged sufficiently overnight to collect the 4 L volume requested by RTI Laboratories for the SVOC-PNA method; only 2 L of volume was provided for the analysis.

Waste Disposal System (WDS) - Site Wide. Five groundwater samples were collected at WDS-SB08, -SB11, -SB12, -SB13, and -SB15 for analysis of VOCs, SVOCs, PCBs, and metals. Additionally, partial samples were collected from WDS-SB06 and -SB09. Recharge in these wells was insufficient to fill all sample bottles; two attempts were made on 6/17/16. One additional attempt will be made on 6/19/16 and whatever volume is collected will be

Motor Pool (MP). One groundwater sample was collected from MP-SB03 for analysis of VOCs, SVOCs, PCBs, and energetics.

H-14. Two groundwater samples were collected from H14-SB01 and H14-SB02 for analysis of PAHs and metals. No groundwater was present in H14-SB03.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Water Level Measurements

In addition to the temporary wells sampled on 6/17/16, the team attempted to sample the following wells, but found that the wells were dry: H14-SB02, H15-SB01, H15-SB02, H15-SB03, WDS-SB14, WDS-SB16, and WDS-SB17. No groundwater samples will be collected from these locations, per the RI WP.

Debris Removal

The old boiler on the Camp Hero State Parks Bluffs was removed and disposed of as solid waste.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/17/2016 Friday

DR No. 16	WRITTEN BY: Amanda Martin	PROJECT NUMBER: 60443903
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Sample Management and Shipment

The RTI Laboratories Project Manager (Kathy Griffin) contacted AECOM at 7:30 PM on 6/16/16 that one of the 6 coolers shipped on 6/15/15 had not yet arrived. Ms. Griffin contacted AECOM at 9:30 AM on 6/17/16 that the delayed cooler had arrived. The cooler temperature was 1.4°C, below the required 4°C, so the included samples will be analyzed. The project chemist (Devon Chicoine) and managers agreed that the samples would not have to be recollected.

Soil and groundwater samples collected collected on Thursday 6/16/16 and Friday 6/17/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Eleven coolers were shipped overnight for Saturday Delivery via FedEx for delivery to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

WORK COMPLETED BY AECOM SUBCONTRACTORS

New England Geotech

New England Geotech completed 7 borings between AOCs STB, 2010, and WDS (-SB20 only) to collect soil cores, should soil resampling be necessary if the delayed cooler was out of hold temperature. After the resampling effort, NEG had completed all borings needed for the Phase 1 RI field effort and demobilized from the site. During the Phase 1 RI Field Activities, NEG completed a total of 119 borings to 10+ ft bgs (including the resampling AOCs STB, 2010, and WDS (-SB20) and reinstallation of wells. Additionally, they completed a total 27 5-foot borings for collection of surface soil.

Clean Globe Environment

John Hudson (CGE) assisted with debris removal from the Camp Hero State Park Bluffs and groundwater sampling.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

None

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

Continuous air monitoring was completed downwind of the geoprobe boring, in accordance with the modified generic NYSDOH CAMP (see RI WP Appendix B). No exceedances were observed.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

DATE: 6/17/2016 Friday

DR No. 16

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

Daily Photos



Photo 1. J Schroeder (AECOM) collecting groundwater samples.



Photo 2. K Priess (AECOM) collecting groundwater samples.

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/17/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates	
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16			
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16	NS/JH 6/16/16			
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16			
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	KP 6/17/16 - part			
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16			
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/17/16 - part			
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16			
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16	JS 6/17/16			
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/17/16			
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16			
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16			
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	MG 6/17/16			
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16			
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	NA DRY 6/17/16			
		WDS-SB18	NS 6/6/16	NB 6/14/16		NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16			
		WDS-SB19	NS 6/6/16	NB 6/9/16		NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16			
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16		
		WDS-SB20 - REDO					MG/KP 6/15/16	MG/KP 6/15/16			
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16		
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16		
WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16				
WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16				
WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16				
WDS-SB26	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16				
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16				
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	JS 6/16/16			
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16				
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16			
		MP-MW01									
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16				
		034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16				
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16				
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16				
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16				
034	Former Building 34	034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16				
		H1-SS01	NS/AM 6/6/16				NS/JH 6/15/16				
		H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16				
		LC Samples	NS/AM 6/6/16						No Liquid Present		
		H2-SS01	BMG 6/9/16	NB 6/9/16				NS/JH 6/15/16			
H2	H-2	H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16				
		LC Samples	BMG 6/9/16	NB 6/9/16					No Liquid Present		
		H3-SS01	NS 6/6/16				MG/KP 6/7/16				
H3	H-3	H3-SS02	NS 6/6/16				MG/KP 6/7/16				
		LC Samples	NS 6/6/16						No Liquid Present		
		H4-SB01	BMG 6/9/16	NB 6/9/16			NS/JH 6/12/16	NS/JH 6/12/16			
H4	H-4	H4-SB02	BMG 6/9/16	NB 6/9/16			MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H4-SB03	BMG 6/9/16	NB 6/9/16			NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
		H5-SS01	BMG/NS 6/9/16					MG/KP 6/13/16			
H5	H-5	H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16				
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16				
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16				
		LC Samples	BMG/NS 6/9/16								
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16			NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
		H6-SB02	BMG 6/9/16	NB 6/9/16			MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H6-SB03	BMG 6/9/16	NB 6/9/16			MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16				MG/KP 6/6/16			
		H9-SS02	NS 6/6/16	NB 6/6/16				MG/KP 6/6/16			

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/17/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		
H14	H-14	H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	MG 6/17/16		
		H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	NA DRY 6/17/16		
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	MG 6/17/16		
H15	H-15	H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
H16	H-16	H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16			
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		LC Samples	BMG 6/7/16	NB 6/7/16					No Liquid Present	
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
		H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
		H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16			
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16			
H22	H-22	H22-SS01	NS 6/10/16				NS/JH 6/15/16			
		H22-SS02	NS 6/10/16				NS/JH 6/15/16			
		LC Samples	NS 6/10/16						No Liquid Present	
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		
AGC3	Camp Hero State Park Bluffs	NA	Debris removal completed 6/17/16							
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/17/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			

Note - Items highlighted in green were completed on 6/17/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/19/2016 Sunday

DR No. 18		WRITTEN BY: Amanda Martin			PROJECT NUMBER: 60443903	
Weather: 75°F Morning Clouds, Afternoon Sun		Days without a lost time injury: 18				
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:	
Greta White	10.25	Alternate SSHO	AECOM	YSI 6920 Water Level Meter (3)		
Amanda Martin	10.25	Site Supervisor	AECOM	GeoTech Peristaltic Pump (3)		
Nicole Schulman	6.5	Geologist	AECOM	PID MiniRae 3000 (4)		
John Schroeder	10.25	Geologist	AECOM	PID MiniRae 2000 (1)		
Mike Glinski	10	Geologist	AECOM	Shondstadt Magnetometer		
Katie Priess	10	Environmental Scientist	AECOM			
Nina Bennerson	7.5	UXO Tech II	AECOM			
DAILY TOTAL	74.75					
TOTAL TO DATE	1428	(on-site hours only)				

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
None	None

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Groundwater Sampling

Groundwater samples were collected at the following AOCs.

Waste Disposal System (WDS) - Site Wide. Three groundwater samples were collected at WDS. Samples began on 6/17/16 at WDS-SB06 and WDS-SB09 were finalized. The sample at WDS-SB08 was collected for analysis of VOCs, SVOCs, PCBs, and metals. The temporary well at WDS-SB09 had insufficient recharge to fill all sample bottles (after four attempts); only VOCs, metals, and 3-1 L bottles for PNA and PCBs could be collected. Additionally, a partial sample was collected from WDS-SB07. Recharge was insufficient to fill all sample bottles after two attempts. One additional attempt will be made on 6/20/16 and whatever volume is collected will be submitted to the lab for analysis of a shortened analyte list.

Motor Pool (MP). One partial groundwater sample was collected from MP-SB02 for analysis of VOCs, SVOCs, and energetics. Recharge was insufficient to fill all sample bottles after ten attempts. One additional attempt will be made on 6/20/16 and whatever volume is collected will be submitted to the lab for analysis of a shortened analyte list.

Engineering Field Office (EFO). One partial groundwater sample was collected from EFO-SB01 for analysis of energetics. Recharge was insufficient to fill all sample bottles after ten attempts (need MS/MSD and Duplicate). One additional attempt will be made on 6/20/16.

Former Building 34. One groundwater sample was collected from 034-SB01 for analysis of PAHs, PCBs, and metals.

H-16. One groundwater sample was collected from H16-SB01 for analysis of VOCs, SVOCs, PCBs, and metals.

H-21. Two groundwater samples were collected from H21-SB02 and -SB03 for analysis of VOCs, SVOCs, PCBs, and metals. One partial sample was collected from H21-SB01; recharge was insufficient to fill all sample bottles. One additional attempt will be made on 6/20/16.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Water Level Measurements

Water levels were measured in all temporary wells in the vicinity of Former Building 203, to determine radial flow on the hill adjacent to former Building 203. Wells gauged included those at AOCs FPH, AST-35, former Building 203 (including PZ-1 through PZ-3), Building 201 (Radar Tower), and WDS (-SB18 and -SB19 only). Water was present in all wells except the one at the Radar Tower (201-SB01). Groundwater samples will be collected from the temporary wells at a later date, with the exception of 201-SB01.

Additionally, approximately 5 ft of light non aqueous phase liquid (LNAPL) which appeared to be weathered petroleum product was observed in piezometer PZ-3, from approximately 8.00 ft btoc to 13.30 ft btoc, determined using an interface probe. Piezometer PZ-3 is located at AOC Former Building 203. AECOM notified the USACE Project Management (Gregory Geopfert and Megan Cullen) immediately.

NYS DEC Pollution Complaint Number 1602757

Due to LNAPL measured at PZ-3 at AOC Building 203, the USACE Project Management (Gregory Geopfert) and Megan Cullen reported a petroleum release at AOC Building 203 to the NYS DEC hotline within 2 hours of discovery. Pollution Complaint Number PC-1602757 was assigned to the reported release. Mr. Dess (NYS Camp Hero Park Superintendent) was also notified that a release at former Building 203 had been reported to NYSDEC.

Building 107 (Electrical Substation) PCB Sampling

The team performed a survey of the transformers in the basement of Building 107 to identify any staining from the transformers. The team wore tyvek suites, rubber booties, respirators with P100/OV cartridges, hardhats, headlamps, and nitrile gloves while working inside the building, due to potential safety concerns with PCBs and working in old/abandoned buildings. Another team member was located outside the entrance of the building within earshot in case of emergencies. Please see photos 4 and 5 of "transformers" below. After inspection of the units, these features on the wall may be more appropriately labeled as electrical distribution boxes. Previous reports have noted that transformers, which were formerly located outside Building 107, were previously properly decommissioned.

Parts of the transformer were still located in the basement of the building (see photos below). Dried product was present on part of the transformer. No staining was observed on the floor; however, most of the floor was covered in mats and/or heavy plywood/wooden ramps/walkways were covering much of the floorspace, and the team was not able to move the wooden objects to see the entire floorspace. Additionally, part of a metal rack which previously ran around the edge of the ceiling had collapsed over part of the transformer and part of the wooden planks.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/19/2016 Sunday

DR No. 18 | **WRITTEN BY:** Amanda Martin | **PROJECT NUMBER:** 60443903

Building 107 (Electrical Substation) PCB Sampling (continued)

The team collected one PCB wipe sample on the outside of the transformer where dried product was observed. Additionally, a sample of dried product was collected from the transformer and the floor (where dried droplets could be picked up). Although no staining was observed, the team attempted to collect a concrete chip sample with a chisel and sledgehammer. After 2 hours of attempted sample collection, approximately only 2 oz of concrete chips had been collected, only 1/4 of the 8 oz requested by the laboratory. The team halted concrete chip sample collection to discuss a more efficient sample method.

AECOM ordered more heavy-duty tools (rotary drill-demolition hammer) for chip sample collection to collect the sample. Concrete chip sample collection will be resumed Monday or Tuesday 6/20/16 when the demolition drill is available.

Materials Survey (Building 10)

The team performed a materials survey of Building 10 to inventory the oil and paint cans previously found by Tom Dess (State Park Superintendent). Materials found were inventoried by type, quantity, and size (see below). The team wore tyvek suites, rubber booties, respirators with P100/OV cartridges, hardhats, and nitrile gloves while working inside the building, due to potential safety concerns with working in old/abandoned buildings.

Item	Quantity	Location
Chevron HyJet IV, Phosphate Ester	25-1 Quart Metal Cans	Main Room
Mobil Jet Oil II	5-1 Quart Metal Cans	Main Room
Exxon Turbo Oil 2389	5-1 Quart Metal Cans	Main Room
Skydrol - Monsanto 500 B-4 Fire Starter Fluid	2-1 Gallon Metal Cans	Main Room
3100 Clean Compound Jet Engine Path Cleaner, B&B Chemical Company	2-5 Gallon Metal Cans	Main Room
Modern All-Purpose Enamel	4-1 Gallon Metal Cans	Back Room

All cans in the Main Room were in poor condition - most were leaking or had leaked, were bulging, rusty, and the labels were barely readable. In the back room, the four Enamel cans were severely rusted and fused to the cart on which they were sitting. (See photos below.)

Sample Management and Shipment

Soil and groundwater samples collected on Friday 6/17/16 and Sunday 6/19/16 were Quality Control checked and recorded on Chain of Custody records, and stored on fresh ice for shipment on Monday 6/20/16.

WORK COMPLETED BY AECOM SUBCONTRACTORS

None

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

AECOM ordered a more heavy-duty tools (demolition hammer) for concrete chip sample collection to collect the concrete chip samples. Concrete chip sample collection will be resumed Tuesday 6/19/16 when the demolition drill is available. As a result, the concrete chip sampling in Battery 113 was rescheduled for Tuesday 6/21/16, instead of Monday 6/20/16, per conversation with Tom Dess (NYS Parks Superintendent).

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

None



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/19/2016 Sunday

DR No. 18

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

As mentioned above, the team wore tyvek suits, rubber booties, respirators with P100/OV cartridges, hardhats, headlamps, and nitrile gloves while working inside Buildings 10 and 107, due to potential health and safety concerns with PCBs and working in old/abandoned buildings. Another team member was located outside the entrance of the building within ear shot in case of emergencies.

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

Daily Photos



Photo 1. Miscellaneous cans in Main Room of Building 10.



Photo 2. Cans of All-Purpose Enamel in Back Room of Building 10.



Photo 3. G White and A Martin in safety attire before entering Building 107 (Electrical Substation) for PCB sampling.



Photo 4. "Transformer" on wall in basement of Building 107 (Electrical Substation). Please also see photo 5 below, after inspection of the units, these features on the wall may be more appropriately labeled as electrical distribution boxes. Transformers were formerly located outside the building on nearby pads which were previously properly decommissioned.

DATE: 6/19/2016 Sunday

DR No. 18

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

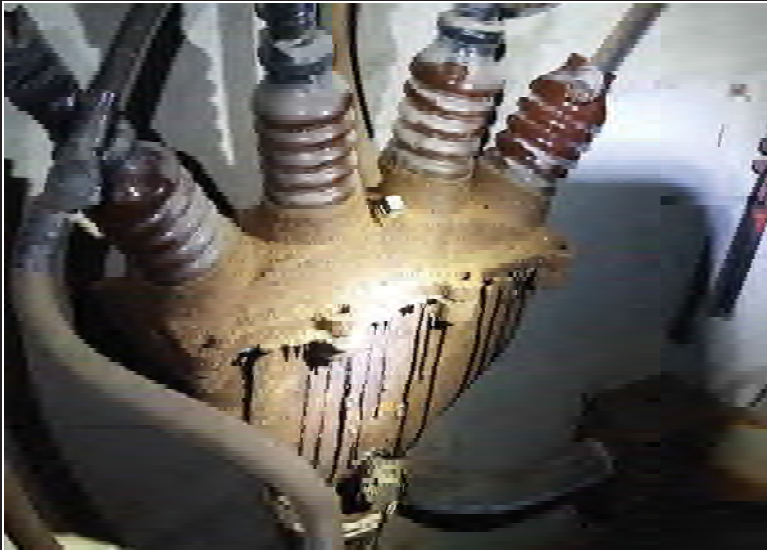


Photo 5. Dried product on outside of "transformer". This feature may more appropriately be identified as distribution boxes or electrical splitters. AECOM is following up with staff electrician for proper identification and reference in future reports. One wipe sample was collected from the casing surface; additionally, chips of the dried product were collected for analysis. Concrete chip samples are scheduled to be taken beneath the unit.

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/19/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16	NS/JH 6/16/16		
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	KP 6/18/16		
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	KP 6/18/16 - part		
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16		
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/18/16		
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16	JS 6/17/16		
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/17/16		
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16		
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16		
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	MG 6/17/16		
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16		
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	NA DRY 6/17/16		
		WDS-SB18	NS 6/6/16	NB 6/14/16		NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16		
		WDS-SB19	NS 6/6/16	NB 6/9/16		NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16		
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16	
WDS-SB20 - REDO					MG/KP 6/15/16	MG/KP 6/15/16				
WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16			
WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16			
WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16			
WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16			
WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
WDS-SB26	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16			
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	JS 6/16/16		
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/19/16 - part		
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16		
		MP-MW01								
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/19/16 - part		
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/19/16		
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16			
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
H1	H-1	H1-SS01	NS/AM 6/6/16				NS/JH 6/15/16			
		H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16			
		LC Samples	NS/AM 6/6/16						No Liquid Present	
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			
		H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			
		LC Samples	BMG 6/9/16	NB 6/9/16					No Liquid Present	
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16			
		H3-SS02	NS 6/6/16				MG/KP 6/7/16			
		LC Samples	NS 6/6/16						No Liquid Present	
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16			
		LC Samples	BMG/NS 6/9/16							
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/19/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	MG 6/17/16		
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	NA DRY 6/17/16		
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	MG 6/17/16		
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16	JS 6/19/16		
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	NA DRY 6/19/16		
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
		H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16			
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		LC Samples	BMG 6/7/16	NB 6/7/16					No Liquid Present	
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
		H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/19/16 - part		
		H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16	MG 6/19/16		
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/19/16		
H22	H-22	H22-SS01	NS 6/10/16				NS/JH 6/15/16			
		H22-SS02	NS 6/10/16				NS/JH 6/15/16			
		LC Samples	NS 6/10/16						No Liquid Present	
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		
AGC3	Camp Hero State Park Bluffs	NA	<i>Debris removal completed 6/17/16</i>							
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/19/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			

Note - Items highlighted in green were completed on 6/19/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/20/2016 Monday

DR No. 19		WRITTEN BY: Amanda Martin			PROJECT NUMBER: 60443903	
Weather: 75°F Morning Clouds, Afternoon Sun		Days without a lost time injury: 19				
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:	
Kelly Lurie	1	SSHO	AECOM	YSI 6920 Water Level Meter (3)		
Greta White	9.25	Alternate SSHO	AECOM	YSI 6920 Water Level Meter (3)		
Amanda Martin	10.25	Site Supervisor	AECOM	GeoTech Peristaltic Pump (3)		
Nicole Schulman	10.25	Geologist	AECOM	PID MiniRae 3000 (4)		
John Schroeder	10.25	Geologist	AECOM	PID MiniRae 2000 (1)		
Mike Glinski	10.25	Geologist	AECOM	Shondstadt Magnetometer		
Katie Priess	10.25	Environmental Scientist	AECOM	Trimble Geo XH		
Nina Bennerson	10.25	UXO Tech II	AECOM	Surveying Equipment (CGE)		
Tony Fiorentone	9.5	Surveyor	CGE			
Chris Gamble	9.5	Surveyor	CGE			
DAILY TOTAL	90.75					
TOTAL TO DATE	1518.75	(on-site hours only)				

SUBCONTRACTORS:		SITE DELIVERIES (indicate size, type, and condition):				
None		None				

WORKED PERFORMED BY AECOM
 The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day. Kelly Lurie arrived on-site at 1600 and replaced Greta White as the SSHO, after which Ms. White demobilized from the site.

Groundwater Sampling
 Groundwater samples were collected at the following AOCs.

Former Building 203. One groundwater sample was collected at 203-SB01 for analysis of VOCs, SVOCs, PCBs, and metals. Four partial samples were collected at 203-SB02, -SB03, -SB04, and -SB05. Recharge in these wells was insufficient to fill all required sample bottleware. Approximately 1-Liter of water was produced at each well over 6 hours of sample collection. Additional attempts will be made on 6/21/16; if sufficient volume cannot be collected, the volume collected will be sent to the laboratory for a shortened analyte list.

Waste Disposal System (WDS) - Site Wide. The partial groundwater sample from WDS-SB07 began on 6/19/16 was finalized for analysis of VOCs, SVOCs, PCBs, and metals. Recharge was insufficient to fill all sample bottles after four attempts; only 3 amber liters could be collected. Two were submitted for analysis of PAHs and one for PCBs.

Two partial samples were collected at WDS-SB18 and -SB19. Recharge in these wells was insufficient to fill all required sample bottleware. Additional attempts will be made on 6/21/16 and the volume is collected will be submitted to the lab for analysis of a shortened analyte list.

Motor Pool (MP). The partial groundwater sample from MP-SB02 was finalized for analysis of VOCs, SVOCs, and energetics.

Engineering Field Office (EFO). The partial groundwater sample from EFO-SB01 was finalized for analysis of energetics.

H-21. The partial sample was from H21-SB01 was finalized for analysis of VOCs, SVOCs, PCBs, and metals.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Surveying and GPS Coordinate Collection
 GPS co-ordinates for borings/temporary wells and surface soil samples were collected at AOCs STB (Building 22), H-11, H-12, H-17, WDS (-SB18 through -SB27), Building 2010, and Building 201 in conjunction with surveying oversight. AECOM collection Northing and Easting co-ordinates (x,y), while the CGE Surveyors collected elevation data. (See details below in "Work Completed by AECOM Subcontractors.")

Sample Management and Shipment
 Soil and groundwater samples collected collected on Friday 6/17/16, Saturday 6/19/16, and Monday 6/20/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Eight coolers were shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.

WORK COMPLETED BY AECOM SUBCONTRACTORS
 Two new team members from Clean Globe Environmental (CGE), Tony Fiorentone and Chris Gamble, arrived on site. They received UXO Awareness Training and reviewed/signed all applicable Activity Hazard Analyses (AHAs) in the on-site Accident Prevention Plan (APP). CGE completed surveying for elevation information at AOCs STB (Building 22), H-11, H-12, H-17, WDS (-SB18 through -SB27), Building 2010, and Building 201. CGE was off-site from 1330 to 1400 for lunch.



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/20/2016 Monday

DR No. 19 WRITTEN BY: Amanda Martin PROJECT NUMBER: 60443903

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Tom Dess (NY State Parks Superintendent) was notified in the morning that 11 team members would be on site on 6/20/16 (including USACE, AECOM, and CGE).

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):
Amanda Martin

Daily Photos



Photo 1. N Schulman collecting GPS co-ordinates as AST-35.

Photo 2. CGE Surveying locations at the Fuel Pump House.

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/20/2016

WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16	
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16	NS/JH 6/16/16	
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16	
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16		
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16		
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	KP 6/19/16	
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	KP 6/20/16	
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16	
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/18/16	
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16	
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16	JS 6/17/16	
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/17/16	
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16	
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16	
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	MG 6/17/16	
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16	
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	NA DRY 6/17/16	
		WDS-SB18	NS 6/6/16	NB 6/14/16	NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	JS 6/20/16 - PART	NS/CGE 6/20/16
		WDS-SB19	NS 6/6/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS 6/20/16 - PART	NS/CGE 6/20/16
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16	NA	MG 6/8/16	MG 6/8/16	KL 6/12/16	NS/CGE 6/20/16
		WDS-SB20 - REDO				MG/KP 6/15/16	MG/KP 6/15/16		NS/CGE 6/20/16
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16	NS/CGE 6/20/16
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16
		WDS-SB23	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16	NS/CGE 6/20/16
		WDS-SB24	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16	NS/CGE 6/20/16
		WDS-SB25	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16
		WDS-SB26	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16		
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	JS 6/16/16	
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/20/16	
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16	
		MP-MW01							
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/20/16	
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/19/16	
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16		
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16		
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16		
		034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16		
H1	H-1	H1-SS01	NS/AM 6/6/16				NS/JH 6/15/16		
		H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16		
		LC Samples	NS/AM 6/6/16						No Liquid Present
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16		
		H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16		
		LC Samples	BMG 6/9/16	NB 6/9/16					No Liquid Present
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16		
		H3-SS02	NS 6/6/16				MG/KP 6/7/16		
		LC Samples	NS 6/6/16						No Liquid Present
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16		
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16	
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16	
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16		
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16		
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16		
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16		
		LC Samples	BMG/NS 6/9/16						
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16	
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16	
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16	
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16		
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16		
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16	NS/CGE 6/20/16
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16	NS/CGE 6/20/16

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/20/2016**

H14	H-14	H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	MG 6/17/16	
		H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	NA DRY 6/17/16	
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	MG 6/17/16	
H15	H-15	H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16	
		H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16	
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16	
H16	H-16	H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16	JS 6/19/16	
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached	NS/CGE 6/20/16
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached	NS/CGE 6/20/16
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached	NS/CGE 6/20/16
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	NA DRY 6/19/16	NS/CGE 6/20/16
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16		NS/CGE 6/20/16
H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16		NS/CGE 6/20/16		
H18	H-18	H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16		
		H18-SS02	BMG 6/7/16	NB 6/7/16				MG/KP 6/12/16	
		LC Samples	BMG 6/7/16	NB 6/7/16					No Liquid Present
H19	H-19	H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA	
		H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA	
H20	H-20	H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16		
		H20-SS02	NS 6/6/16	NB 6/6/16				MG/KP 6/7/16	
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present
H21	H-21	H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/20/16	
		H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16	MG 6/19/16	
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/19/16	
H22	H-22	H22-SS01	NS 6/10/16				NS/JH 6/15/16		
		H22-SS02	NS 6/10/16					NS/JH 6/15/16	
		LC Samples	NS 6/10/16						No Liquid Present
P113	Plotting Room 113	P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16	
		P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16	
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16	
AGC3	Camp Hero State Park Bluffs	NA	<i>Debris removal completed 6/17/16</i>						
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16		
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16		
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16		

Note - Items highlighted in green were completed on 6/20/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/21/2016 Tuesday

DR No. 20		WRITTEN BY: Amanda Martin			PROJECT NUMBER: 60443903	
Weather: 75°F Morning Showers, Afternoon Sun		Days without a lost time injury: 20				
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:	
Kelly Lurie	11	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Mark Keonig, USACE	
Amanda Martin	11	Site Supervisor	AECOM	GeoTech Peristaltic Pump (3)		
Nicole Schulman	11	Geologist	AECOM	PID MiniRae 3000 (4)		
John Schroeder	11	Geologist	AECOM	PID MiniRae 2000 (1)		
Mike Glinski	11	Geologist	AECOM	Shondstadt Magnetometer		
Katie Priess	11	Environmental Scientist	AECOM	Trimble Geo XH		
Nina Bennerson	11	UXO Tech II	AECOM	Generator (CGE)		
Chris Gamble	10	Surveyor	CGE	Hammer Drill (CGE)		
DAILY TOTAL	87					
TOTAL TO DATE	1605.75	(on-site hours only)				

SUBCONTRACTORS:		SITE DELIVERIES (indicate size, type, and condition):	
None		None	

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Groundwater Sampling

Groundwater samples were collected at the following AOCs.

Former Building 203. Four groundwater samples were finalized at 203-SB02, -SB03, -SB04, and -SB05. Recharge in the wells was insufficient to fill all desired sample bottleware after over 10 attempts per well over two days; analyses able to be collected are described below.

- SB02 VOCs, metals, 2 full Liters and 1 partial liter for SVOC-PNA, and 2-L for PCBs were collected.
- SB03 VOCs, metals, 2 full Liters and 1 partial liter for SVOC-PNA, and 2-L for PCBs were collected.
- SB04 VOCs, metals, and 1.5-L for SVOC-PNA were collected.
- SB05 VOCs, metals, and 2-L for SVOC-PNA were collected.

Waste Disposal System (WDS) - Site Wide. The partial groundwater samples at WDS-SB18 and -SB19 were finalized for analysis of VOCs, SVOCs, PCBs, and metals. Recharge in these wells was insufficient to fill all desired sample bottleware after 10 attempts over two days; only two or three amber liters could be collected instead of six.

H-14. Two groundwater samples were collected from H14-SB01 and H14-SB03 for analysis of PAHs and metals.

H-17. One groundwater sample was collected from H17-SB03 and H14-SB03 for analysis of VOCs, SVOCs, PCBs, and metals. Additionally, one partial groundwater sample was collected from H17-SB02. Recharge in the well was insufficient to fill all sample bottleware; additional attempts will be made to complete the sample on 6/22/16.

QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

Battery 113 Survey and Sample Collection

A site survey of Battery 113 was conducted to identify the presence of tanks and waste drums, assess if standing water was present in pits, and identify visual evidence of potentially PCB-contaminated stained concrete. Prior to entering the building, the team conducted demolition of the sealed entryway to Battery 113 to create an entrance for the team, using a hammer drill and sledge hammer. Appropriate safety protocols were observed (see "Safety Observations" Section).

Four team members entered the battery to complete the survey. Team members wore tyvek suits, rubber booties, nitrile gloves, full or half-face respirators with P100/OV cartridges, hardhats, and head lamps. The buddy system was utilized while inside the Battery; no team member was ever left alone.

Additionally, at least one team member was stationed outside the entrance of the Battery at all times to 1) prevent park visitors from trespassing in the secure area and attempting to enter, 2) as a safety precaution for the people inside, and 3) to bring additional supplies to the people inside the Battery so they wouldn't have to exit until the work was complete. The team used extreme caution navigating the battery and taking care with where to step; many of the pit/manhole covers were not stable and were collapsing. Additionally, white mold was present throughout the building on walls, ceilings, old furniture, and other structures.

Two pits with standing water were observed (see locations indicated on attached field map). Additional pits/open manholes/trenches were observed throughout the Battery, but no others contained standing water. One liquid characterization sample was collected from an open pit (B113-LC02-01) for disposal purposes (analyses: VOCs, SVOCs, PCBs, and metals). A second sample was not collected from the other pit with water because it appeared to contain human waste.

Approximately mid-way down the main hallway, another narrow hallway led to the Power Room where Tanks 3 and 4 were still present on the wall. No labels were present on the tanks, but the team approximates that each tanks had a 250 gallon capacity. The team was able to determine that fluid was still present in the Tanks; however, the team could not tell how full the tanks were. There was a level meter on the wall that potentially measured tank volume, which read 3/4 full; however, the team could not verify the meter's purpose or whether it was still working. The cylinders below Tanks 3 and 4 were not labeled (or were too rusted to read the labels; however, they appeared to be empty (hollow noise when the team knocked on the cylinders).



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/21/2016 Tuesday

DR No. 20 WRITTEN BY: Amanda Martin PROJECT NUMBER: 60443903

WORKED PERFORMED BY AECOM (continued)

Battery 113 Survey and Sample Collection (continued)

One liquid characterization sample (B113-LC01-01) was collected from diesel Tanks 3 and 4 and taken for fuel analysis, ignitability, and toxicity for purposes of disposal characterization. Approxintaly 16 L of volume was collected and volume was still present in the tanks.

Trenches with piping were present in the room with the tanks; some of the trenches were covered with metal plate covers and others were covered with wooden planks. The wooden planks were rotting and falling apart in most places. No tanks or storage units were observed in the trenches. Additionally, the Cashin report had mentioned drums present in the Tanks 3 and 4 room. No drums were present at the time of the survey.

No transformer units were observed on the main hallway of the Battery. However, a transformer room was present adjacent to the power room where the 2 diesel tanks were located. Portions of the transformer were remaining; dried oil was observed on parts of the transformer and staining was noted on the concrete floor (see photos below). One wipe sample (B113-WP01-01) was collected from the oil-stained surface of the transformer; one concrete chip sample (B113-CC01-01) was collected at the location of the stained concrete, using the hammer drill with a decontaminated drill bit. Additionally, an equipment blank was collected from the decontaminated drill bit after sampling.

Surveying and GPS Coordinate Collection

GPS co-ordinates for surface soil sample locations were collected at AOCs H-1, H-1, H-19, H-22, BG02, and BG04.

Sample Management and Shipment

No samples were shipped to RTI Laboratories on 6/21/16. Groundwater samples began on 6/20/16 were finalized and additional concrete chip, wipe, and liquid chatacterization samples were collected on 6/21/16. All samples were held on fresh ice overnight for shipment on 6/22/16. The fuel sample from the diesel tanks were arranged to be taken to AB Environmental laboratory for purposes of disposal charcaterization.

WORK COMPLETED BY AECOM SUBCONTRACTORS

Chris Gamble (CGE) was on site and completed demolition of the Battery 113 entrance for AECOM to access the bunker. Additionally, Mr. Gamble was stationed outside the entrance to Battery 113 while team members were inside to prevent trespassers from entering and as a safety precaution. Once the work at Battery 113 was complete for the day, Mr. Gamble assisted with GPS co-ordinate collection for surface soil sample locations at AOCs H-1, H-1, H-19, H-22, BG02, and BG04.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Tom Dess (NY State Parks Superintendent) was notified in the morning that 10 team members would be on site on 6/20/16 (including USACE, AECOM, and CGE).

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

Hearing protection, eye protection, utility gloves, hard hats, and saftey boots were utilized by the team during demolition of the Battery 113 entrance. All team members that entered Battery 113 wore tyvek suites, rubber booties, nitrile gloves, full or half-face respirators with P100/OV cartridges, hardhats, and head lamps. The buddy system was utilized while inside the Battery; no team member was ever left by themselves. Additionally, at least one team member was stationed outside the entrance of the Battery at all times to 1) prevent park visitors from attempting to enter, 2) as a safety precaution for the people inside, and 3) to bring additional supplies to the people inside the Battery so they wouldn't have to exit until the work was complete.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/21/2016 Tuesday

DR No. 20

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

Daily Photos



Photo 1. Demolition of Battery 113 entrance.



Photo 2. Demolition of Battery 113 entrance.



Photo 3. The team in safety gear before entering Battery 113.



Photo 4. Standing water in pit near entrance inside Battery 113. (This pit was not sampled).

DATE: 6/21/2016 Tuesday

DR No. 20

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903



Photo 5. Storage tanks with petroleum product inside Battery 113. One liquid characterization sample was collected here (B113-LC01-01). The contents are suspected to be weathered diesel or fuel oil.



Photo 6. Piping under wooden floorboard in tank room of Battery 113. No tanks were identified in the trenches.



Photo 7. Rotting wooden floorboards over piping inside tank room (Battery 113).



Photo 8. Portion of conduits with oil dripping in Transformer Room (Battery 113). One wipe sample (B113-WP01-01) was collected here for analysis of PCBs.

DATE: 6/21/2016 Tuesday

DR No. 20

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903



Photo 9. Concrete chip sampling with Hammer Drill in Transformer Room (Battery 113).



Photo 10. Floor staining in Transformer Room (Battery 113). One concrete chip sample was collected here (B113-CC01-01) for analysis of PCBs.

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/21/2016**

AOO	AOO Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
B113	Battery 113	113-CC01							AM/JS 6/21/16	
		113-WP01							AM/JS 6/21/16	
		113-LC01							AM/JS 6/21/16	
		113-LC02							KL/NB 6/21/16	
203	Former Building 203	203-SB01	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	KP 6/20/16		
		203-SB02	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS/KP 6/21/16		
		203-SB03	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS/KP 6/21/16		
		203-SB04	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	MG 6/21/16		
		203-SB05	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	MG 6/21/16		
		PZ-1	AM 6/16/16	NB 6/16/16	NYSP 6/15/16	MG/KP 6/16/16				
		PZ-2	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16				
PZ-3	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16						
2010	Building 2010 (UST 30)	2010-SB01	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	No Well		NS/CGE 6/20/16
		2010-SB01 - REDO				MG/KP 6/15/16	MG/KP 6/15/16	No Well		
		2010-SB02	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	KL 6/12/16		NS/CGE 6/20/16
		2010-SB02 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			
F100C	Building F100C (UST 34)	F100C-SB01	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16		
		F100C-SB02	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16		
AST35	AST 35/H-13	AST35-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/16/16		
		AST35-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16		
		AST35-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16		
		AST35-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16		
FPH	Fuel Pump House and Distribution Line for AST-35	FPH-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL 6/14/16		
		FPH-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16		
		FPH-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16		
		FPH-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16		
STB	Building 22 (Tank B)	STB-SB01	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	KL 6/10/16		NS/CGE 6/20/16
		STB-SB01 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SB02	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	No GW Sample		NS/CGE 6/20/16
		STB-SB02 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SB03	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	KL 6/10/16		NS/CGE 6/20/16
		STB-SB03 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SB04	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	No GW Sample		NS/CGE 6/20/16
		STB-SB04 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SS05	BMG 6/7/16	NB 6/7/16			MG 6/8/16			NS 6/20/16
		STB-SS05 - REDO					MG/KP 6/15/16			NS 6/20/16
		STB-SS06	BMG 6/7/16	NB 6/7/16			MG 6/8/16			NS 6/20/16
		STB-SS06 - REDO					MG/KP 6/15/16			NS 6/20/16
STB-SS07	BMG 6/7/16	NB 6/7/16			MG 6/8/16			NS 6/20/16		
STB-SS07 - REDO					MG/KP 6/15/16			NS 6/20/16		
3001	Building 3001	3001-MW01								
112	Battery 112 (UST 36, 37)	112-CC01							No Access	
		112-CC02							No Access	
		112-CC03							No Access	
107	Building 107	107-CC01								
		107-WP01								
		107-LC01								
201	Building 201	201-SB01	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	NA DRY 6/19/16		NS/CGE 6/20/16
		201-WP01							No Access	

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/21/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16	NS/JH 6/16/16		
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16			
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	KP 6/19/16		
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	KP 6/20/16		
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16		
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/18/16		
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16	JS 6/17/16		
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/17/16		
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16		
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16		
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	MG 6/17/16		
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16		
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	NA DRY 6/17/16		
		WDS-SB18	NS 6/6/16	NB 6/14/16		NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	JS/KP 6/21/16	NS/CGE 6/20/16
		WDS-SB19	NS 6/6/16	NB 6/9/16		NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS/KP 6/21/16	NS/CGE 6/20/16
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16	NS/CGE 6/20/16
		WDS-SB20 - REDO					MG/KP 6/15/16	MG/KP 6/15/16		NS/CGE 6/20/16
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16	NS/CGE 6/20/16
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16
WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16	NS/CGE 6/20/16		
WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16	NS/CGE 6/20/16		
WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16		
WDS-SB26	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16		
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16	NS/CGE 6/20/16		
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	JS 6/16/16		
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/20/16		
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16		
		MP-MW01								
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/20/16		
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/19/16		
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			
		034-SS03	BMG 6/9/16	NB 6/9/16				NS/JH 6/13/16		
		034-SS04	BMG 6/9/16	NB 6/9/16				MG/KP 6/13/16		
		034-SS05	BMG 6/9/16	NB 6/9/16				MG/KP 6/13/16		
H1	H-1	H1-SS01	NS/AM 6/6/16				NS/JH 6/15/16			NS/CGE 6/21/16
		H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16			NS/CGE 6/21/16
		LC Samples	NS/AM 6/6/16						No Liquid Present	
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			NS/CGE 6/21/16
		H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			NS/CGE 6/21/16
		LC Samples	BMG 6/9/16	NB 6/9/16					No Liquid Present	
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16			
		H3-SS02	NS 6/6/16				MG/KP 6/7/16			
		LC Samples	NS 6/6/16						No Liquid Present	
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16			
		H5-SS03	BMG/NS 6/9/16					MG/KP 6/13/16		
		H5-SS04	BMG/NS 6/9/16					MG/KP 6/13/16		
		LC Samples	BMG/NS 6/9/16						No Liquid Present	
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16			
		H9-SS02	NS 6/6/16	NB 6/6/16				MG/KP 6/6/16		

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/21/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		NS/CGE 6/20/16
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		NS/CGE 6/20/16
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		NS/CGE 6/20/16
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	MG 6/21/16		
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	NA DRY 6/17/16		
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	MG 6/21/16		
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16	JS 6/19/16		
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		NS/CGE 6/20/16
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		NS/CGE 6/20/16
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		NS/CGE 6/20/16
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	NA DRY 6/19/16		NS/CGE 6/20/16
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	KP 6/21/16 - PART		NS/CGE 6/20/16
H18	H-18	H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	MG 6/21/16		NS/CGE 6/20/16
		H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		LC Samples	BMG 6/7/16	NB 6/7/16					No Liquid Present	
		H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		NS/CGE 6/21/16
H19	H-19	H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		NS/CGE 6/21/16
		H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
H20	H-20	H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
		H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/20/16		
H21	H-21	H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16	MG 6/19/16		
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/19/16		
		H22-SS01	NS 6/10/16				NS/JH 6/15/16			NS/CGE 6/21/16
H22	H-22	H22-SS02	NS 6/10/16				NS/JH 6/15/16			NS/CGE 6/21/16
		LC Samples	NS 6/10/16						No Liquid Present	
		P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		
P113	Plotting Room 113	P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		
		AGC3	Camp Hero State Park Bluffs	NA	<i>Debris removal completed 6/17/16</i>					
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/21/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16

Note - Items highlighted in green were completed on 6/21/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/22/2016 Wednesday

DR No. 21		WRITTEN BY: Amanda Martin			PROJECT NUMBER: 60443903	
Weather: H 81°F Partly Cloudy		Days without a lost time injury: 21				
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:	
Kelly Lurie	10.5	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Mark Keonig, USACE	
Amanda Martin	10.5	Site Supervisor	AECOM	GeoTech Peristaltic Pump (3)		
Nicole Schulman	10.5	Geologist	AECOM	PID MiniRae 3000 (4)		
John Schroeder	10.5	Geologist	AECOM	PID MiniRae 2000 (1)		
Mike Glinski	10.5	Geologist	AECOM	Shondstadt Magnetometer		
Katie Priess	10.5	Environmental Scientist	AECOM	Trimble Geo XH		
Nina Bennerson	10.5	UXO Tech II	AECOM	Generator (CGE)		
Tony Fiorentine	10	Surveyor	CGE	Survey Equipment (CGE)		
Chris Gamble	10	Surveyor	CGE	Hammer Drill (CGE)		
DAILY TOTAL	93.5					
TOTAL TO DATE	1699.25	<i>(on-site hours only)</i>				

SUBCONTRACTORS:		SITE DELIVERIES (indicate size, type, and condition):				
None		None				

WORKED PERFORMED BY AECOM

The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Groundwater Sampling

Groundwater samples were collected at the following AOCs.
Engineering Field Office (EFO). One groundwater sample was collected at EFO-SB01 for analysis of energetics. (This was a resample due to an out-of-temperature cooler containing the previous sample).
Motor Pool (MP). Two groundwater samples were collected at MP-SB03 and MP-MW01 (the existing well for nonpotable water at the Motor Pool). MP-SB03 was collected for analysis of VOCs, SVOCs, PCBs, Energetics; MP-MW01 was collected for analysis of VOCs, SVOCs, PCBs, Energetics, and metals. (MP-SB03 was a resample due to an out-of-temperature cooler).
 QA/QC (MS/MSD and Duplicate) samples were collected at various AOCs to achieve a rate of 10% duplicates and 20% MS/MSD per analysis site-wide.

The team made multiple visits to Building 3001 to attempt to identify the existing well in the area (called 3001-MW01 for the Phase 1 RI work); historic maps indicated that the well was in the back of the building under the Verizon Antenna, which was gated off from access and not accessible by the park service. Tom Dess was able to meet the team around 1700 and identified the well in another location: within the manhole where the new Suffolk County Water Line entered near Building 3001. The team will attempt to sample the well on 6/23/2016.

Building 107 - Sample Finalization

The concrete chip sample (107-CC01-01) in Building 107 was finalized; sample collection began on 6/19/16 in conjunction with the Building 107 Survey. However, the hammer/chisel method was not sufficient for obtaining concrete chips in this building and a hammer drill was obtained from CGE to finalize the sample. The team wore tyvek suites, rubber booties, respirators with P100/OV cartridges, hardhats, headlamps, and nitrile gloves while working inside the building due to due to potential safety concerns with PCBs and working in old/abandoned buildings. Another team member was located outside the entrance of the building within earshot in case of emergencies.

Surveying and GPS Coordinate Collection

GPS co-ordinates for borings/temporary wells and surface soil samples were collected at AOCs former Building 203, Building 2010, AST-35, FPH, WDS (-SB01 through -SB17), Motor Pool, Engineering Field Office, former Building 34, H-4, H-6, H-14, H-21, and Plotting Room 113, in conjunction with surveying oversight. AECOM collected Northing and Easting co-ordinates (x,y), while the CGE surveyors collected elevation data.

Sample Management and Shipment

Soil, groundwater, wipe, chip, and liquid characterization samples collected on Monday 6/20/16, Tuesday 6/21/16, and Wednesday 6/22/16 were Quality Control checked, recorded on Chain of Custody records, and packed for shipment. Eight coolers were shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI). Chain of Custody records were e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/22/2016 Wednesday

DR No. 21

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORK COMPLETED BY AECOM SUBCONTRACTORS

Chris Gamble and Tony Fiorintine (CGE) completed surveying of the remaining temporary wells at AOCs former Building 203, Building 2010, AST-35, FPH, WDS (-SB01 through -SB17), Motor Pool, Engineering Field Office, former Building 34, H-4, H-6, H-14, H-21, and Plotting Room 113.

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AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Tom Dess (NY State Parks Superintendent) was notified in the morning that 11 team members would be on site on 6/20/16 (including USACE, AECOM, and CGE).

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

One team member discovered an imbedded tick during evening tick check on 6/21/2016. An AECOM incident report was completed by the SSSH Kelly Lurie and all appropriate managers were notified.

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

**Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
Last Updated: 6/22/2016**

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
B113	Battery 113	113-CC01							AM/JS 6/21/16	
		113-WP01							AM/JS 6/21/16	
		113-LC01							AM/JS 6/21/16	
		113-LC02							KL/NB 6/21/16	
203	Former Building 203	203-SB01	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	KP 6/20/16		NS/CGE 6/22/16
		203-SB02	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS/KP 6/21/16		NS/CGE 6/22/16
		203-SB03	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS/KP 6/21/16		NS/CGE 6/22/16
		203-SB04	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	MG 6/21/16		NS/CGE 6/22/16
		203-SB05	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	MG 6/21/16		NS/CGE 6/22/16
		PZ-1	AM 6/16/16	NB 6/16/16	NYSP 6/15/16	MG/KP 6/16/16				NS/CGE 6/22/16
		PZ-2	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16				NS/CGE 6/22/16
PZ-3	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	MG/KP 6/16/16				NS/CGE 6/22/16		
2010	Building 2010 (UST 30)	2010-SB01	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	No Well		NS/CGE 6/20/16
		2010-SB01 - REDO				MG/KP 6/15/16	MG/KP 6/15/16	No Well		
		2010-SB02	NS 6/7/16	NB 6/7/16	NS/CGE May 2016	MG 6/8/16	MG 6/8/16	KL 6/12/16		NS/CGE 6/20/16
		2010-SB02 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			
F100C	Building F100C (UST 34)	F100C-SB01	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16		NS/CGE 6/22/16
		F100C-SB02	NS 6/9/16	NB 6/10/16	NS/CGE May 2016	MG/KP 6/10/16	MG/KP 6/10/16	KL 6/12/16		NS/CGE 6/22/16
AST35	AST 35/H-13	AST35-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/16/16		NS/CGE 6/22/16
		AST35-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16		NS/CGE 6/22/16
		AST35-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16		NS/CGE 6/22/16
		AST35-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE May 2016	MG/KP 6/12/16	MG/KP 6/12/16	JS 6/14/16		NS/CGE 6/22/16
FPH	Fuel Pump House and Distribution Line for AST-35	FPH-SB01	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL 6/14/16		NS/CGE 6/22/16
		FPH-SB02	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16		NS/CGE 6/22/16
		FPH-SB03	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16		NS/CGE 6/22/16
		FPH-SB04	BMG 6/9/16	NB 6/9/16	NS/CGE 6/10/16	NS/JH 6/12/16	NS/JH 6/12/16	KL/NB 6/13/16		NS/CGE 6/22/16
STB	Building 22 (Tank B)	STB-SB01	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	KL 6/10/16		NS/CGE 6/20/16
		STB-SB01 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SB02	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	No GW Sample		NS/CGE 6/20/16
		STB-SB02 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SB03	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	KL 6/10/16		NS/CGE 6/20/16
		STB-SB03 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SB04	BMG 6/7/16	NB 6/7/16		MG 6/8/16	MG 6/8/16	No GW Sample		NS/CGE 6/20/16
		STB-SB04 - REDO				MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		STB-SS05	BMG 6/7/16	NB 6/7/16			MG 6/8/16			NS 6/20/16
		STB-SS05 - REDO					MG/KP 6/15/16			NS 6/20/16
		STB-SS06	BMG 6/7/16	NB 6/7/16			MG 6/8/16			NS 6/20/16
		STB-SS06 - REDO					MG/KP 6/15/16			NS 6/20/16
		STB-SS07	BMG 6/7/16	NB 6/7/16			MG 6/8/16			NS 6/20/16
STB-SS07 - REDO					MG/KP 6/15/16			NS 6/20/16		
3001	Building 3001	3001-MW01								
112	Battery 112 (UST 36, 37)	112-CC01							No Access	
		112-CC02							No Access	
		112-CC03							No Access	
107	Building 107	107-CC01							AM 6/22/16	
		107-WP01							AM 6/22/16	
		107-LC01							AM 6/22/16	
201	Building 201	201-SB01	BMG 6/9/16	NB 6/9/16	NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	NA DRY 6/19/16		NS/CGE 6/20/16
		201-WP01							No Access	

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AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates	
WDS	Abandoned Waste Disposal Systems (Site-wide)	WDS-SB01	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		NS/CGE 6/22/16	
		WDS-SB02	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/14/16	MG/KP 6/14/16	NS/JH 6/16/16		NS/CGE 6/22/16	
		WDS-SB03	BMG 6/9/16	NB 6/10/16	NS/CGE 6/10/16	NS/JH 6/14/16	NS/JH 6/14/16	NS/JH 6/16/16		NS/CGE 6/22/16	
		WDS-SB04	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB05	NS 6/10/16			NS/JH 6/14/16	NS/JH 6/14/16				
		WDS-SB06	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	KP 6/19/16			NS/CGE 6/22/16
		WDS-SB07	AM 6/14/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	KP 6/20/16			NS/CGE 6/22/16
		WDS-SB08	BMG 6/9/16	NG 6/10/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16			NS/CGE 6/22/16
		WDS-SB09	NS 6/10/16	NB 6/10/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/18/16			NS/CGE 6/22/16
		WDS-SB10	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16			NS/CGE 6/22/16
		WDS-SB11	AM 6/12/16	NB 6/14/16		MG/KP 6/13/16	MG/KP 6/13/16	JS 6/17/16			NS/CGE 6/22/16
		WDS-SB12	BMG 6/9/16	NB 6/9/16		MG/KP 6/13/16	MG/KP 6/13/16	KP 6/17/16			NS/CGE 6/22/16
		WDS-SB13	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/17/16			NS/CGE 6/22/16
		WDS-SB14	AM 6/14/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16			NS/CGE 6/22/16
		WDS-SB15	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	MG 6/17/16			NS/CGE 6/22/16
		WDS-SB16	NS 6/12/16	NB 6/14/16		MG/KP 6/14/16	MG/KP 6/14/16	NA DRY 6/17/16			NS/CGE 6/22/16
		WDS-SB17	NS 6/12/16	NB 6/14/16		NS/JH 6/14/16	NS/JH 6/14/16	NA DRY 6/17/16			NS/CGE 6/22/16
		WDS-SB18	NS 6/6/16	NB 6/14/16		NYSP 6/15/16	MG/KP 6/16/16	MG/KP 6/16/16	JS/KP 6/21/16		NS/CGE 6/20/16
		WDS-SB19	NS 6/6/16	NB 6/9/16		NYSP 6/15/16	NS/JH 6/16/16	NS/JH 6/16/16	JS/KP 6/21/16		NS/CGE 6/20/16
		WDS-SB20	BMG/NS 6/6/16	NB 6/7/16		NA	MG 6/8/16	MG 6/8/16	KL 6/12/16		NS/CGE 6/20/16
		WDS-SB20 - REDO					MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/20/16
		WDS-SB21	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/12/16		NS/CGE 6/20/16
		WDS-SB22	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KP/KL/NS 6/8/16		NS/CGE 6/20/16
WDS-SB23	BMG/NS 6/6/16	NB 6/7/16		NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		NS/CGE 6/20/16		
WDS-SB24	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KL 6/9/16		NS/CGE 6/20/16		
WDS-SB25	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		NS/CGE 6/20/16		
WDS-SB26	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		NS/CGE 6/20/16		
WDS-SB27	BMG/NS 6/6/16	NB 6/7/16		NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		NS/CGE 6/20/16		
MP	Motor Pool	MP-SB01	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	JS 6/16/16		NS/CGE 6/22/16	
		MP-SB02	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/20/16		NS/CGE 6/22/16	
		MP-SB03	BMG 6/9/16	NB 6/10/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	JS 6/22/16		NS/CGE 6/22/16	
		MP-MW01						MG 6/22/16			NS/CGE 6/22/16
EFO	Engineering Field Office	EFO-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	KP 6/22/16		NS/CGE 6/22/16	
034	Former Building 34	034-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/13/16	NS/JH 6/13/16	JS 6/19/16		NS/CGE 6/22/16	
		034-SS02	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			NS/CGE 6/22/16	
		034-SS03	BMG 6/9/16	NB 6/9/16			NS/JH 6/13/16			NS/CGE 6/22/16	
		034-SS04	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			NS/CGE 6/22/16	
		034-SS05	BMG 6/9/16	NB 6/9/16			MG/KP 6/13/16			NS/CGE 6/22/16	
H1	H-1	H1-SS01	NS/AM 6/6/16				NS/JH 6/15/16			NS/CGE 6/21/16	
		H1-SS02	NS/AM 6/6/16				NS/JH 6/15/16			NS/CGE 6/21/16	
		LC Samples	NS/AM 6/6/16						No Liquid Present		
H2	H-2	H2-SS01	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			NS/CGE 6/21/16	
		H2-SS02	BMG 6/9/16	NB 6/9/16			NS/JH 6/15/16			NS/CGE 6/21/16	
		LC Samples	BMG 6/9/16	NB 6/9/16					No Liquid Present		
H3	H-3	H3-SS01	NS 6/6/16				MG/KP 6/7/16				
		H3-SS02	NS 6/6/16				MG/KP 6/7/16				
		LC Samples	NS 6/6/16						No Liquid Present		
H4	H-4	H4-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16			NS/CGE 6/22/16	
		H4-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		NS/CGE 6/22/16	
		H4-SB03	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		NS/CGE 6/22/16	
H5	H-5	H5-SS01	BMG/NS 6/9/16				MG/KP 6/13/16				
		H5-SS02	BMG/NS 6/9/16				MG/KP 6/13/16				
		H5-SS03	BMG/NS 6/9/16				MG/KP 6/13/16				
		H5-SS04	BMG/NS 6/9/16				MG/KP 6/13/16				
		LC Samples	BMG/NS 6/9/16						No Liquid Present		
H6	H-6	H6-SB01	BMG 6/9/16	NB 6/9/16		NS/JH 6/12/16	NS/JH 6/12/16	JS 6/15/16		NS/CGE 6/22/16	
		H6-SB02	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		NS/CGE 6/22/16	
		H6-SB03	BMG 6/9/16	NB 6/9/16		MP/KP 6/12/16	MP/KP 6/12/16	JS 6/15/16		NS/CGE 6/22/16	
H9	H-9	H9-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16				
		H9-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/6/16				

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AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
H11	H-11	H11-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	KP/KL/NS 6/8/16		NS/CGE 6/20/16
		H11-SB02	BMG/NS 6/6/16	NB 6/7/16	NA	MG/KP 6/7/16	MG/KP 6/7/16	MG/KP 6/7/16		NS/CGE 6/20/16
H12	H-12	H12-SB01	BMG/NS 6/6/16	NB 6/7/16	NA	NS/KL 6/7/16	NS/KL 6/7/16	KL 6/9/16		NS/CGE 6/20/16
		H14-SB01	BMG 6/9/16	NB 6/9/16	NA	NS/JH 6/13/16	NS/JH 6/13/16	MG 6/21/16		NS/CGE 6/22/16
H14	H-14	H14-SB02	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	NA DRY 6/17/16		NS/CGE 6/22/16
		H14-SB03	BMG 6/9/16	NB 6/9/16	NA	MG/KP 6/13/16	MG/KP 6/13/16	MG 6/21/16		NS/CGE 6/22/16
		H15-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
H15	H-15	H15-SB02	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H15-SB03	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/15/16	MG/KP 6/15/16	NA DRY 6/17/16		
		H16-SB01	BMG/NS 6/9/16	NB 6/10/16	NS/CGE 6/10/16	MG/KP 6/13/16	MG/KP 6/13/16	JS 6/19/16		NS/CGE 6/22/16
H17	H-17	H17-SB01	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		NS/CGE 6/20/16
		H17-SB02	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		NS/CGE 6/20/16
		H17-SB03	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16	GW not reached		NS/CGE 6/20/16
		H17-SB01 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	NA DRY 6/19/16		NS/CGE 6/20/16
		H17-SB02 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	KP 6/21/16 - PART		NS/CGE 6/20/16
H18	H-18	H17-SB03 - REDO	BMG/AM 6/6/16	NB 6/9/16	NS 6/9/16	MG/KP 6/16/16	MG/KP 6/16/16	MG 6/21/16		NS/CGE 6/20/16
		H18-SS01	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		H18-SS02	BMG 6/7/16	NB 6/7/16			MG/KP 6/12/16			
		LC Samples	BMG 6/7/16	NB 6/7/16					No Liquid Present	
		H19-SS01	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		NS/CGE 6/21/16
H19	H-19	H19-SS02	NS 6/6/16	NB 6/6/16	NA	NA	NS/JH 6/15/16	NA		NS/CGE 6/21/16
		H20-SS01	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
H20	H-20	H20-SS02	NS 6/6/16	NB 6/6/16			MG/KP 6/7/16			
		LC Samples	NS 6/6/16	NB 6/6/16					No Liquid Present	
		H21-SB01	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/20/16		NS/CGE 6/22/16
H21	H-21	H21-SB02	BMG/NS 6/9/16	NB 6/10/16	NA	MG/KP 6/14/16	MG/KP 6/14/16	MG 6/19/16		NS/CGE 6/22/16
		H21-SB03	BMG/NS 6/9/16	NB 6/10/16	NA	NS/JH 6/14/16	NS/JH 6/14/16	MG 6/19/16		NS/CGE 6/22/16
		H22-SS01	NS 6/10/16				NS/JH 6/15/16			NS/CGE 6/21/16
H22	H-22	H22-SS02	NS 6/10/16				NS/JH 6/15/16			NS/CGE 6/21/16
		LC Samples	NS 6/10/16						No Liquid Present	
		P113-SB01	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		NS/CGE 6/22/16
P113	Plotting Room 113	P113-SB02	NS 6/10/16	NB 6/10/16	NA	MP/KP 6/12/16	MP/KP 6/12/16	JS 6/16/16		NS/CGE 6/22/16
		P113-SB03	NS 6/10/16	NB 6/10/16	NA	NS/JH 6/12/16	NS/JH 6/12/16	JS 6/17/16		NS/CGE 6/22/16
		AGC3	Camp Hero State Park Bluffs	NA	<i>Debris removal completed 6/17/16</i>					
BG01	Background Samples	BG01-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BG01-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
		BB01-SS08	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/9/16	MG/KP 6/9/16			
BG02	Background Samples	BG02-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
		BG02-SS08	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			NS/CGE 6/21/16
BG03	Background Samples	BG03-SB01	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB02	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB03	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SB04	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS05	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS06	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			
		BG03-SS07	NS 6/7/16	NB 6/10/16	NS 6/9/16	MG/KP 6/10/16	MG/KP 6/10/16			

Camp Hero Phase 1 RI Field Activities
Field Task Tracking Sheet
 Last Updated: 6/22/2016

AOC	AOC Name	Location ID	Flagging	UXO Anomaly Avoidance	Vegetation Removal	Soil Boring	Soil Samples	Groundwater Samples	CC, WP, LC Samples	GPS Coordinates
BG04	Background Samples	BG04-SB01	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SB02	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SB03	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SB04	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SS05	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SS06	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16
		BG04-SS07	NS 6/7/16	NB 6/7/16	NS 6/9/16	MG/KP 6/15/16	MG/KP 6/15/16			NS/CGE 6/21/16

Note - Items highlighted in green were completed on 6/22/16



**United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York**

Contractor Daily Reports

DATE: 6/23/2016 Thursday

DR No. 22		WRITTEN BY: Amanda Martin		PROJECT NUMBER: 60443903	
Weather: H 78°F Partly Cloudy		Days without a lost time injury: 22			
NAME:	HRS	TRADE:	COMPANY:	EQUIPMENT:	VISITORS/AFFILIATION:
Kelly Lurie	7	SSHO	AECOM	YSI 6920 Water Level Meter (3)	Mark Keonig, USACE
Amanda Martin	7	Site Supervisor	AECOM	GeoTech Peristaltic Pump (3)	
Nicole Schulman	7	Geologist	AECOM	PID MiniRae 3000 (4)	
John Schroeder	7	Geologist	AECOM	PID MiniRae 2000 (1)	
Mike Glinski	7	Geologist	AECOM	Shondstadt Magnetometer	
Katie Priess	7	Environmental Scientist	AECOM	Trimble Geo XH	
Nina Bennerson	7	UXO Tech II	AECOM		
Chris Gamble	4	Surveyor/Geologist	CGE		
DAILY TOTAL	53				
TOTAL TO DATE	1752.25	(on-site hours only)			

SUBCONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
None	Call-a-Head NY picked up the Porta-John from the Site. Pick-up of the Storage Units (AB Richards) was scheduled for Tuesday 6/28/2016.

WORKED PERFORMED BY AECOM
The AECOM team arrived on site at 0700 and completed the Morning Tailgate Health and Safety Meeting. The team reviewed the health and safety procedures with all on-site team members and task hazards associated with scheduled field work for the day.

Groundwater Sampling
The team attempted to collect a groundwater sample from the existing well at Building 3001, which was previously used for water in the building, prior to connection to Suffolk County Water 5 years ago. However, after pumping 2.4 liters from well 3001-MW01, the pump stopped producing water. The peristaltic tubing intake was at a depth of 18.36 btoc. A depth to water measurement at the time the pump stopped producing water confirmed the water level to be 18.36 feet btoc. The initial depth to water prior to any pumping was 2.42 feet btoc, representing an initial water column of 15.94 feet from the water surface to the tubing intake. The 2.4 liters removed was consistent with the volume of water in a 15.94 column of water in 1-inch PVC pipe.

A depth to water measurement 30 minutes later at 0900 confirmed that the water level was still at 18.36 feet btoc, as did another measurement 30 minutes after that at 0930. Taking these observations into account, the team determined that it was very likely that the 1-inch PVC pipe was simply the water supply line from the pump, and that there was no communication between the water bearing formation and the 1-inch PVC pipe. Hence, the team chose not to submit the water collected because:

1. The water in the 1-inch PVC casing is stagnant water trapped in the casing by the supply pump check valve from approximately 5 years earlier when the water supply was changed over to the municipal supply line, OR
2. The water in the 1-inch PVC casing is surface water runoff from the surrounding paved/grass area.

While there is a 6-inch drain pipe at the bottom of the vault, the top of the well cap and 1-inch PVC pipe was just 14 inches above the vault floor. One cannot rule out a scenario in which a heavy rain could flood the vault with enough surface runoff to exceed the ability of the drain pipe to drain the vault, thus allowing surface runoff into the 1-inch PVC casing (which is not plugged).

The dimensions of the vault are 62 inches long, 60 inches wide, and 65 inches deep. The vault entrance is 36 inches long and 27 inches wide. Although there were ladder rungs to allow access into the vault, and the 4-inch well cap could likely be removed to inspect the well further, the vault may be a confined space, which would require further preparation to enter. Brendan McGuinness (AECOM) will research Suffolk County records to see if there is a well abandonment record.

Temporary Well Abandonment
All temporary wells were abandoned except those at former Building 203 (where the free product was located), AST-35, and the FPH. These temporary wells were left in place, because 1) they were located in locked areas of the park and 2) in case the need to re-sample arises, associated with the spill report filed for the AOC. Temporary wells which were left in place were cut at-grade and closed with a PVC cap.

Temporary wells were abandoned per applicable NYSDEC guidelines by removing (at minimum) the top 5-feet of riser from the temporary well and backfilling with bentonite, with sand at the top.

Status of Former Deep Supply Well at Building F100C
As requested by Mr. Goepfert (USACE), AECOM surveyed for the location and condition of the formerly used deep water well outside of Building F100c (and topographically downgradient of Building 203). However, the well could not be located outside of Building F100c and AECOM could not get inside the pump house building due to nailed up boarding to see if the well head existed inside the building.

GPS Coordinate Collection
GPS co-ordinates for borings/temporary wells and surface soil samples were collected at AOCs H-15, Plotting Room 113, Building 3001, H-2, H-5, H-9, H-18, H-20, BG01 and BG03.



United States Army Corps of Engineers
Former Camp Hero Remedial Investigation
Montauk, New York

Contractor Daily Reports

DATE: 6/23/2016 Thursday

DR No. 22

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

WORKED PERFORMED BY AECOM (continued)

IDW Management

One drum with liquid IDW (from purge water and decontamination water) and one drum with soil IDW (from petroleum-contaminated soil cores) were staged on-site at the Motor Pool. The drums were properly labeled with Non-Hazardous Waste Labels. The drums will be stored here until the Phase 2 RI Field Event, and IDW generated during Phase 2 will be added to the drums. At the end of Phase 2, IDW samples will be collected for waste characterization and off-site disposal of IDW will be arranged in a manner appropriate to its classification.

Sample Management and Shipment

Environmental samples collected on Sunday 6/19/16 (chip, wipe) and Tuesday 6/21/16 (groundwater) were Quality Control-checked, recorded on Chain of Custody records, and packed for shipment. One cooler was shipped overnight via FedEx for delivery to RTI Laboratories (Livonia, MI). The Chain of Custody record was e-mailed to the project chemist (Devon Chicoine) and the RTI Laboratories Project Manager (Kathy Griffin) in the evening for shipment tracking. Additionally, custody of cooler #084, containing the fuel characterization samples, was transferred to Chris Gamble (CGE) at 1400 for transport to AB Oil for characterization (contracted through CGE). The cooler was delivered to AB Oil the afternoon of 6/23/2016.

Demobilization from the Site

Once the tasks for the day were complete, the team packed all supplies and equipment, cleaned the storage unit and guard shack, packaged unused bottleware and coolers for shipment to RTI Laboratories, and demobilized from the site. The Camp Hero State Park master keys and West Gate Guard Shack key were returned to Tom Dess at Montauk Downs.

WORK COMPLETED BY AECOM SUBCONTRACTORS

Chris Gamble was on site from 1000 to 1400 to assist with well abandonment and other miscellaneous tasks. Custody of cooler #084, containing the fuel characterization samples, was transferred to Mr. Gamble at 1400 for transport to AB Oil for characterization (contracted through CGE). The cooler was delivered to AB Oil the afternoon of 6/23/2016. The sample will be analyzed by Dexsil test for halogenated solvents, toxicity and ignitability.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

Tom Dess (NY State Parks Superintendent) was notified in the morning that 10 team members would be on site (including USACE, AECOM, and CGE).

REQUEST FOR INFORMATION (RFI)

None

TRANSMITTALS / SUBMITTALS

None

AIR MONITORING COMMENTS:

None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

None

SITE OBSERVATIONS

None

Superintendent (Signature):

Amanda Martin

DATE: 6/23/2016 Thursday

DR No. 22

WRITTEN BY: Amanda Martin

PROJECT NUMBER: 60443903

Daily Photos



Photo 1. 3001-MW01 vault, showing confined nature of the space.



Photo 2. 3001-MW01 vault, showing surface runoff potential.



Photo 3. 3001-MW01: 4-inch casing with 1-inch PVC, 6-inch drain pipe.



Photo 4. 3001-MW01, municipal water supply line and prior holes for well supply line.

Attachment I
Photograph Log

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AGC Site 3. Old, rusted boiler on the Camp Hero State Park Bluffs/AGC Site 3, May 2016. Boiler was removed and disposed of in June 2016.



AGC Site 4. Historic Infrastructure exposed from erosion of bluff outcrops at ACG Site 4, May 2016.



Fuel Pump House/AST 35. Geophysical survey around the Fuel Pump House to identify former fuel distribution line, May 2016.



Fuel Pump House/AST 35. Sample location coordinate collection using the Global Positioning System Trimble GeoXH unit, June 2016.



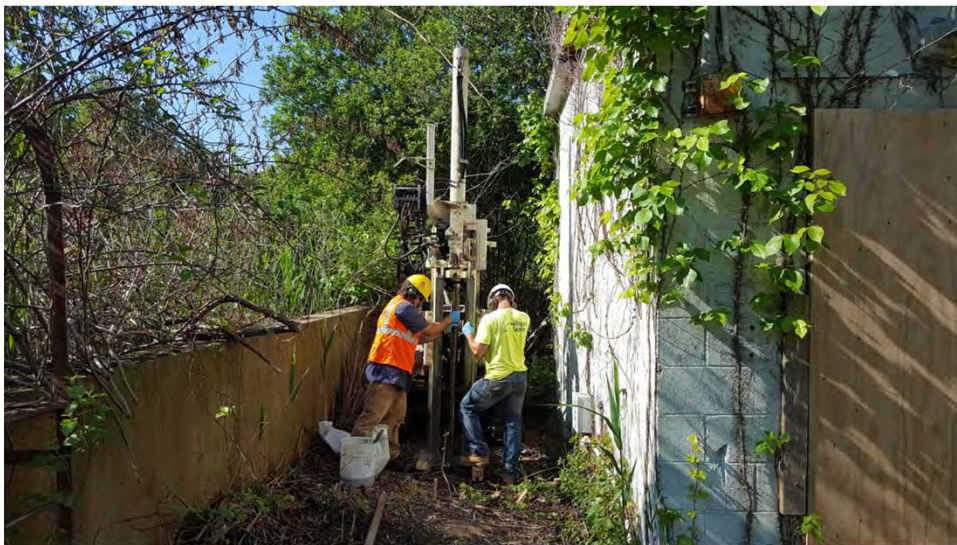
Fuel Pump House/AST 35. Collection of temporary well location surface elevations by the Clean Globe Environmental (CGE) land surveying team, June 2016.



Fuel Pump House/AST 35. Geologist Mike Glinski (AECOM) performing PID-screening of soil cores from location FPH-SB01, June 2016.



Fuel Pump House/AST 35. Geologist Mike Glinski (AECOM) completing soil logging at FPH-SB01 while Kathryn Priess (AECOM) collects soil samples, June 2016.



Fuel Pump House/AST 35. Soil core collection from location AST35-SB03 with the Direct Push 6620 DT rig by New England Geotech (NEG), June 2016.



Fuel Pump House/AST 35. View of the former AST 35 containment area and the Fuel Pump house from the North, with sample locations flagged, June 2016.



Fuel Pump House/AST 35. Nicole Schulman (AECOM) completing soil logging at AST35-SB03 while John Hudson (CGE) collects soil samples, June 2016.



Fuel Pump House/AST 35. The end of the former fuel distribution line at the Fuel Pump House, identified by Shondstadt® magnetometer, June 2016.



Fuel Pump House/AST 35. Location FPH-SB03 had elevated PID readings in soil and the temporary well headspace and petroleum odor in purged groundwater, June 2016.



Former Building 034. Debris at former Building 034, which led to development of an additional AOC, May 2016.



Former Building 034. Furnace at former Building 034 near former building remnants, May 2016.



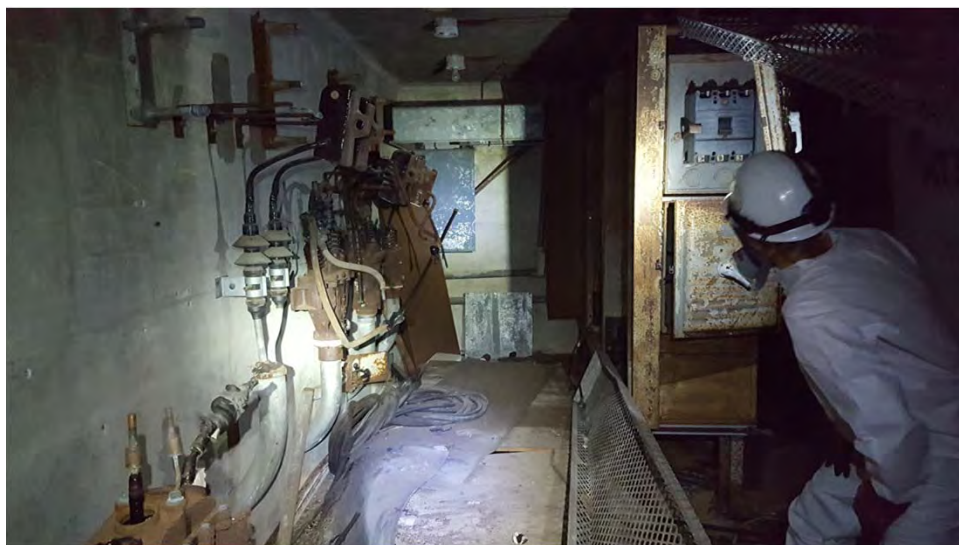
Former Building 034. Botanist Steve Glenn (AECOM) performs the rare plant survey at former Building 034, May 2016.



Building 107 (Electrical Substation). Greta White and Amanda Martin (AECOM) in PPE before entering Building 107 to collect concrete chip samples for PCBs, June 2016.



Building 107 (Electrical Substation). Portions of the former transformer, including a medium voltage cable breakout, June 2016.



Building 107 (Electrical Substation). Portions of the former transformer, including a medium voltage cable breakout and metal boxes, June 2016.



Building 107 (Electrical Substation). Close-up of a medium voltage cable breakout with dried oil, June 2016. One wipe sample was collected from the surface.



Battery 113. Chris Gamble (CGE) begins demolition of the entrance to Battery 113 with a demolition drill, June 2016.



Battery 113. John Schroeder (AECOM) progresses demolition of the entrance to Battery 113 with a sledge hammer, June 2016.



Battery 113. Final crawlspace entrance to Battery 113, June 2016.



Battery 113. Hazardous materials survey team in PPE, including tyvek suits and Air-Purifying Respirators (APRs), prior to entrance to Battery 113, June 2016.



Battery 113. Hazardous materials survey team entering Battery 113 with lights, sampling equipment, and other supplies, June 2016.



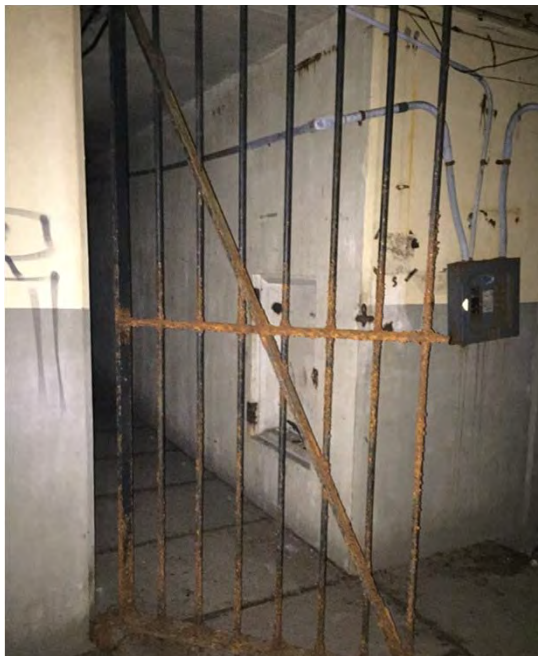
Battery 113. Pit with standing water in Battery 113. Liquid characterization sample B113-LC02-01 collected at this location, June 2016.



Battery 113. Second pit with standing water near entrance to Battery 113. No liquid characterization collected at this location, June 2016.



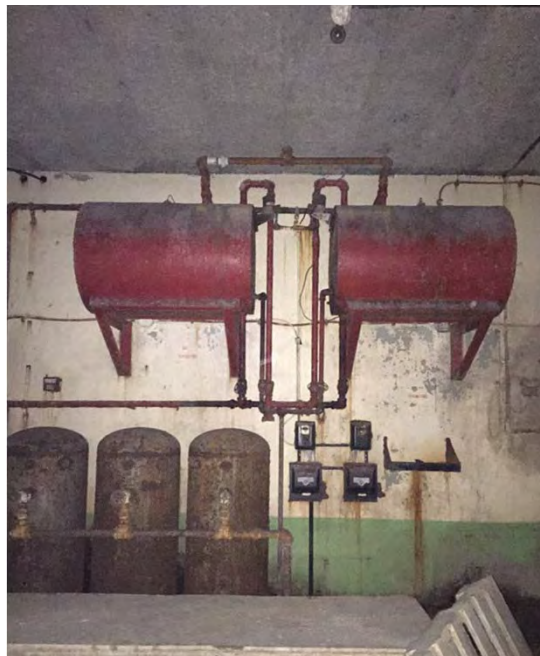
Battery 113. Access to main hallway of Battery 113 from entryway, June 2016. This demolition was already present when the team entered the Battery.



Battery 113. Metal gate at hallway to Power Room in Battery 113, June 2016. Gate is rusted in place and cannot open further.



Battery 113. Stairwell and hallway from main hallway in Battery 113 to the Power Room, with rotten wooden floorboards near foot of stairwell, June 2016.



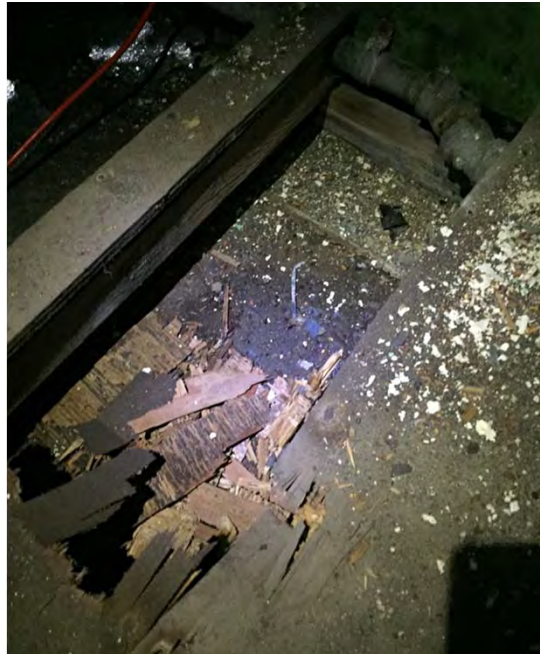
Battery 113. Fuel ASTs 3 and 4 in the Power Room of Battery 113. Tanks were not labeled; weathered fuel was present in tanks, June 2016.



Battery 113. Three extremely rusted, unlabeled cylinders present below ASTs 3 and 4; the cylinders appeared to be empty, June 2016.



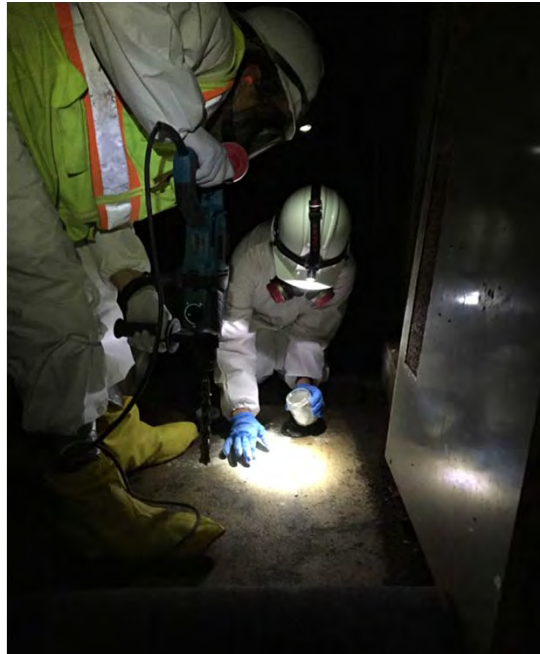
Battery 113. Trenches with piping in the Power Room of Battery 113, June 2016.



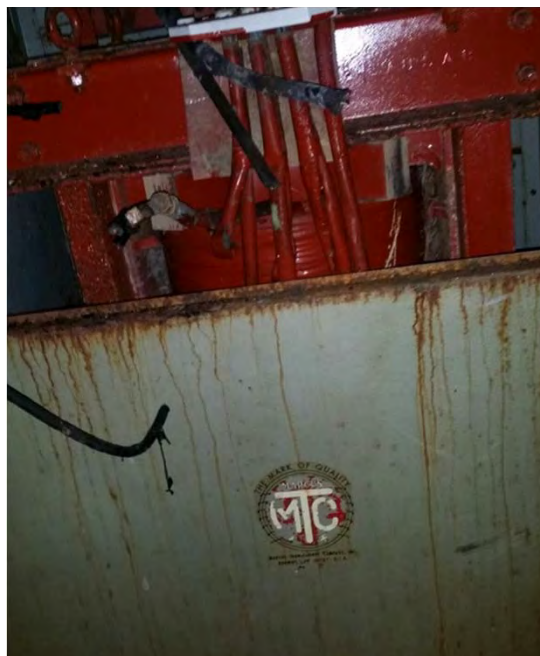
Battery 113. Trenches with piping in the Power Room of Battery 113, covered with rotting wooden planks, June 2016.



Battery 113. Floor staining in Electric Room of Battery 113 which was the location of concrete chip sample B113-CC01-01, June 2016.



Battery 113. Collection of concrete chip sample in Battery 113 Electric Room with rotary hammer drill at location of floor staining, June 2016.



Battery 113. Former Transformer case in Battery 113 Electric Room, June 2016.



Battery 113. Partial cable components of the former transformer in the Electric Room of Battery 113, June 2016.



Battery 113. Partial cable components of the former transformer in the Electric Room of Battery 113, June 2016.



Former Building 203. Soil core collection from location 203-SB02 with the Direct Push 6620 DT rig by New England Geotech (NEG), June 2016.



Former Building 203. Former Building 203 area with the Radar Tower in the background, location 203-SB04 in the foreground, June 2016.



Former Building 203. The end of the former fuel distribution line from the Fuel Pump House at former Building 203, identified by Shondstadt® magnetometer, June 2016.



Former Building 203. Location PZ-03 at former Building 203 being gauged with an interface probe; five feet of free product was identified on 17 June 2016.



Building 203. Drilling equipment parked at former Building 203 beside the Radar Tower (Building 201), June 2016.



Building 2010. Pipe on the east side of Building 2010, June 2016.



Building 2010. Pipe at Building 2010, June 2016.



Building 2010. Unknown structure near Building 2010, June 2016.



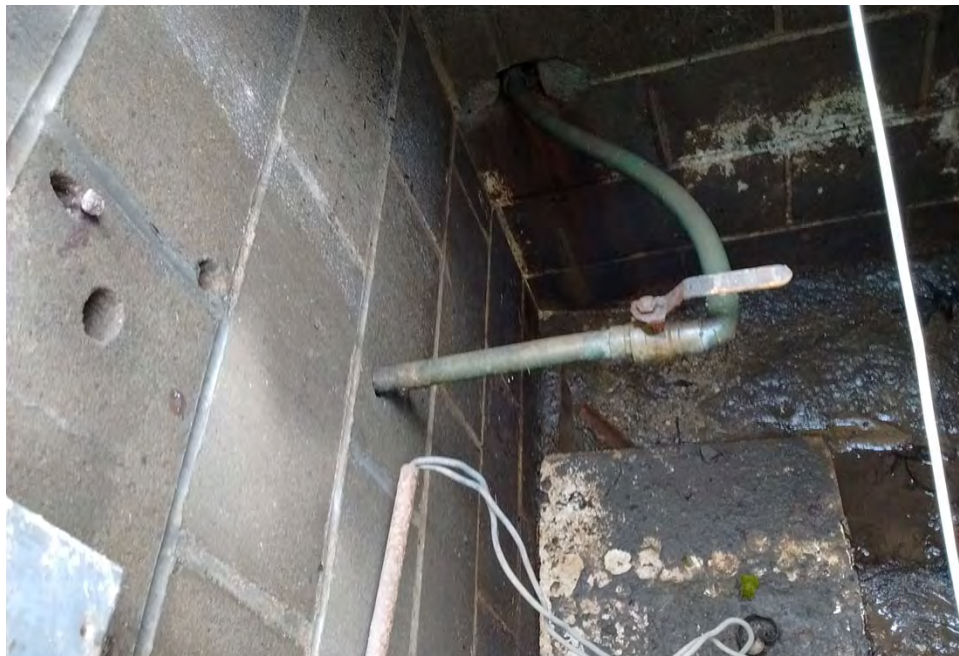
Existing well at Building 3001. Vault for historic water well at Building 3001, showing the confined nature of the space, June 2016.



Existing well at Building 3001. Vault for historic water well at Building 3001, showing surface runoff potential, June 2016.



Existing well at Building 3001. Inside of the vault for the existing well at Building 3001, showing 4-inch casing with a 1-inch PVC pipe, with 6-inch drain pipe, June 2016.



Existing well at Building 3001. Municipal water supply line and prior holes for well supply line inside vault, June 2016.



Building F100C. New England Geotech completing decontamination of the drill rod at Building F100C, June 2016.



Building F100C. Piping at Building F100C, June 2016.



H-2. Drum at H-2, June 2016.



H-3. Drum at H-3, May 2016.



H-3. Building foundation located near H-3 identified during May 2016 site walk.



H-3. Surface soil sample collection at H-3 via hand auger, June 2016.



H-3. Surface soil sample collection and sample management at H-3, June 2016.



H-5. Drainage swale at H-5 behind the Motor Pool, May 2016.



H-9. Old, rusted boiler at H-9, May 2016.



H-9. Additional debris at H-9 near boiler, May 2016.



H-11 and H-12. Drilling activities at AOCs H-11 and H-12 in the picnic area of Camp Hero State Park, June 2016.



H-11 and H-12. Drilling activities at AOCs H-11 and H-12 in the picnic area of Camp Hero State Park, June 2016.



H-15. Soil core collection at H-15, June 2016.



H-15. Soil cores from location H15-SB02, from 0 to 25 ft bgs, with very slight moisture noted from 15 to 25 ft bgs, June 2016.



H-17. Soil cores from H-17, displaying sandy lithology, June 2016.



H-18. UXO Technician II LeNina Bennerson (AECOM) performs a magnetometer survey of H-18; there was no drum at this location but metal debris were identified, June 2016.



H-19. The former AST at AOC H-19, May 2016. Surface soil sampling and PID headspace screening were conducted underneath the AST in June 2016.



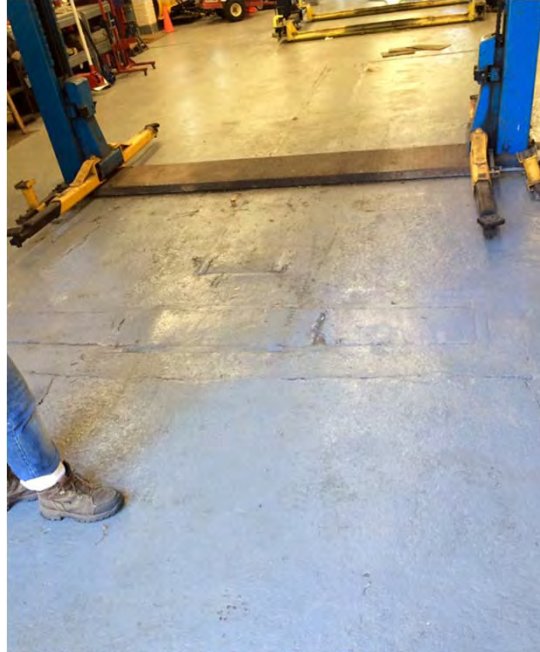
H-20. The drum at H-20, located within the wooden revetments of Camp Hero State Park, June 2016.



H-20. Geologist Mike Glinski (AECOM) and Mike Podamy (NEG) conduct surface soil sampling adjacent to H-20, June 2016.



Motor Pool. Marked electric lines from the utility clearance at the Motor Pool, June 2016.



Motor Pool. Motor Pool garage bay drilling location (MP-SB01), which was the site of the former DoD hydraulic lift, June 2016.



Motor Pool. Soil core collection from location MP-SB01 inside the Motor via the Direct Push 6620DT rig by NEG, June 2016.



Motor Pool. Soil core collection from location MP-SB01 inside the Motor via the Direct Push 6620DT rig by Keith Precious (NEG), June 2016.



Motor Pool. John Hudson (CGE) completing PID screening of the soil core from MP-SB01, the location within the Motor Pool garage bay, June 2016.



Motor Pool. Close-up of the soil core from MP-SB01, the location within the Motor Pool garage bay, June 2016.



Motor Pool. Existing well at the Motor Pool near active ASTs, June 2016.



Plotting Room 113. Entrance to Plotting Room 113. Metal debris was located nearby via magnetometer survey in May 2016; sampling was conducted in June 2016.



Suspected Tank B (Building 22). Mike Podamy (NEG) conducting soil borings around Suspected Tank B via Direct Push rig 6620DT, June 2016.



Suspected Tank C (former Building 2). Building debris uncovered while conducting "test holes" at the suspected tank C location, June 2016.



Suspected Tank C (former Building 2). Pipe uncovered while conducting "test holes" at the suspected tank C location, June 2016.



Suspected Tank C (former Building 2). "Test holes" were conducted in June 2016, to investigate anomalies identified in the May 2016 geophysical survey.



Suspected Tank H (Building 109). "Test holes" were conducted in June 2016, to investigate anomalies identified in the May 2016 geophysical survey.



Suspected Tank H (Building 109). Wire mesh and rebar identified in "test holes" to investigate anomalies identified in the May 2016 geophysical survey, June 2016.



Suspected Tank H (Building 109). Wire mesh and rebar identified in "test holes" to investigate anomalies identified in the May 2016 geophysical survey, June 2016.



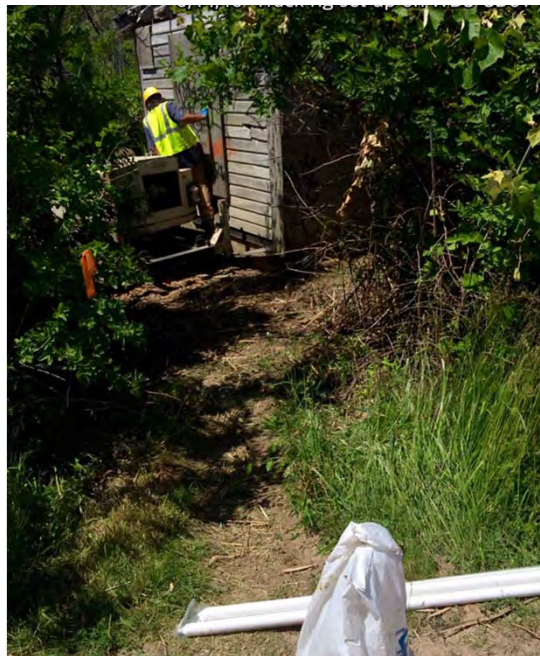
Suspected Tank H (Building 109). Backfilled "test holes" at suspected tank H, June 2016.



Waste Disposal System. Soil core collection from a waste disposal system location via the Direct Push 6620DT rig by Keith Precious (NEG), June 2016.



Waste Disposal System. Re-collection of the WDS-SB01 0 to 5 ft bgs run, which yielded more recovery than the initial run; still wet/mucky near surface, June 2016.



Waste Disposal System. Soil core collection from location WDS-SB01 by the chlorine contact chamber via the Direct Push 6620DT rig by Mike Podamy (NEG), June 2016.



Waste Disposal System. Soil core collection from location WDS-SB03 by the chlorine contact chamber via the Direct Push 6620DT rig by Keith Precious (NEG), June 2016.



Waste Disposal System. Concrete cover/manhole near roadside at the original RI Work Plan WDS-SB06 location, June 2016.



Waste Disposal System. Portion of water line found in vicinity of the original RI Work Plan WDS-SB06 location, June 2016.



Waste Disposal System. Uncovered concrete feature/suspected septic tank or cleanout found in area to which WDS-SB06 and -SB07 were relocated, June 2016.



Waste Disposal System. Flagged locations for WDS-SB06 and WDS-SB07 across the road from the original RI Work Plan locations, June 2016.



Waste Disposal System. Advancing boring WDS-SB07, June 2016. Location was relocated across the street due to identification of a suspected septic tank.



Waste Disposal System. Soil core from location WDS-SB07 showing zone of concrete rubble around 6.5 to 7 ft bgs, June 2016.



Waste Disposal System. Soil cores at location WDS-SB14, including the first four runs (0 to 20 ft bgs), June 2016.



Kathryn Priess (AECOM) collecting groundwater samples.



Mike Glinski (AECOM) collecting groundwater samples.



John Schroeder (AECOM) collecting groundwater samples.