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NAVAL FACILITIES ENGINEERING COMMAND, ATLANTIC
REMEDIAL ACTION CONTRACT (RAC)
CONTRACT NO. N62470-13-D-8007
CONTRACT TASK ORDER NO. WE03

INITIAL ABATEMENT ACTION REPORT
SITE AS705 - UST CLOSURE

UST DEMOLITION
MARINE CORPS INSTALLATIONS EAST – MARINE CORPS BASE CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

April 2014

Prepared for

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Naval Facilities Engineering Command, Mid-Atlantic
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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

BGS	Below Ground Surface
DRO	Diesel Range Organics
EMD	Environmental Management Division
EPH	Extractable Petroleum Hydrocarbons
GRO	Gasoline Range Organics
GPS	Global Positioning System
HDPE	High Density Polyethylene
LEL	Lower Explosive Limit
LUR	Land Use Restrictions
LSA	Limited Site Assessment
MADEP	Massachusetts Department of Environmental Protection
MCAS	Marine Corps Air Station
MCIEAST-MCB CAMLEJ	Marine Corps Installations East-Marine Corps Base Camp Lejeune
MS	Matrix Spike
MSCC	Maximum Soil Contaminant Concentration
MSD	Matrix Spike Duplicate
NAVFAC	Naval Facilities Engineering Command
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NRP	Notice of Residual Petroleum
O_2	Oxygen
OICC	Officer In Charge of Construction
PCB	Polychlorinated Biphenyls
PG	Professional Geologist
PPM	Parts Per Million
RCRA	Resource Conservation and Recovery Act
SSL	Soil Screening Level
STGW	Soil To Groundwater
SVOC	Semi-Volatile Organic Compound
TPH	Total Petroleum Hydrocarbons
TtEC	Tetra Tech EC, Inc.
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbons
µg/L	Micrograms Per Liter

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A. SITE INFORMATION

Under Task Order WE03 of Contract N6270-13-D-8007, the Department of the Navy, Naval Facilities Engineering Command (NAVFAC) Atlantic, tasked Tetra Tech EC, Inc. (TtEC) with performing underground storage tank (UST) removals at Marine Corps Installations East – Marine Corps Base Camp Lejeune (MCIEAST-MCB CAMLEJ). This UST Closure Report was developed to document the removal activities performed at Site AS705.

1. Site Identification

a. Date of Report: March 20, 2014

b. Facility ID: 0U-0-0000002740

c. UST Incident No.: Pending.

d. Site Name: AS-705

e. Site Street Address: Building AS-705 Flounder Road

f. City/State/Zip: Marine Corps Air Station, New River/NC/28540

g. County: Onslow

h. Description of Geographical Data Point

Groundwater well nearby UST AS705

i. Location Method: Handheld global positioning system (GPS)

j. Latitude: 34.4323516 degrees N

k. Longitude: -77.255497 degrees W

2. Information about Contacts Associated with the Leaking UST System

a. UST Property Owner:

Commanding General, MCIEAST-MCB CAMLEJ, G-F/EMD/EQB

12 Post Lane

Camp Lejeune, NC 28547

(910) 451-9017

b. UST Operator:

MCIEAST – MCB CAMLEJ, G-F/EMD/EQB

c. Property Occupant/Owner Point of Contact:

Ms. Jenni Reed

MCIEAST – MCB CAMLEJ, G-F/EMD/EQB

12 Post Lane

Camp Lejeune, NC 28547

(910) 451-9017

d. Consultant/Contractor:

Tetra Tech EC, Inc.

5250 Challedon Drive

Virginia Beach, Virginia 23462

(757) 518-8491 ext. 136

e. Analytical Laboratory

Accutest Laboratories Southeast, Inc.

4405 Vineland Road, Suite C15

Orlando, Florida 32811

(407) 425-6700

N.C. Certification No. 573

3. Information about Release

a. Date Discovered: 1/22/2014.

b. Estimated Quantity of Release:

Unknown.

c. Not applicable.Cause of Release

Unknown.

d. Source of Release:

Unknown.

e. Sizes and contents of UST system from which the release occurred:

Not applicable.

4. Professional Geologist Certification

I, Robert M Sok II, a Professional Geologist for Tetra Tech, do certify that the information contained in this report is correct and accurate to the best of my knowledge and the UST removal was conducted in accordance with good engineering practice and all applicable MCB and North Carolina Department of Environment and Natural Resources (NCDENR) regulations and guidelines.

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B. SITE HISTORY AND CHARACTERIZATION

1. UST Owner and Operator Information

Information about the owner/operator and other responsible party for the UST at AS705 is provided in **Table 1**.

2. UST information

UST AS705 was located adjacent to Building AS-705, Bachelor Officer's Quarters, in the northeast corner of Marine Corps Air Station (MCAS) New River in a relatively isolated area northeast of the airfield. UST AS705 was a 10,000 gallon fiberglass tank that contained #2 fuel oil. The tank had reached its service life and was no longer needed. The site location is shown in **Figure 1**. A site layout showing the former UST location and other pertinent site features is presented in **Figure 2**. Additional information about the UST is provided in **Table 2**.

3. Non-UST information

Site 42 - Building 705 Bachelor Officer's Quarters Dump is located in the northeast corner of MCAS New River and is comprised of approximately 2.8 acres maintained grass with drainage swales and wetlands with dense vegetation. UST AS705 is located on the south-central boundary of Site 42. Site 42 was reportedly used as a dump for landscape and construction debris from 1950 to 1960.

An Initial Assessment Study (IAS) conducted in 1983 by Water and Air Research (WAR) identified several sites (including Site 42) and concluded that there was no specific evidence to suggest the presence of hazardous or toxic substances. Therefore, WAR concluded, no further assessment was required, and Site 42 was closed. In order to assess the accuracy of this conclusion, Site 42 was one of several sites investigated as part of a voluntary confirmatory sampling program to evaluate the potential environmental impacts to soil and groundwater which may have resulted from historical land use practices. Results of the sampling at Site 42 were presented in the Final Confirmatory Sampling Report (CH2M Hill, 2011). As part of the investigation subsurface soil and groundwater samples were collected in addition to performing a Human Health Risk Screening and an Ecological Risk Screening.

Seven subsurface soil samples and three groundwater samples were collected and analyzed for metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). For soils, concentrations of VOCs and SVOCs were below North Carolina Soil Screening Levels (SSLs) and adjusted EPA Industrial Soil Regional Screening Levels (RSLs). Benzo(a)pyrene was the only SVOC detected above the EPA Residential Soil RSL (15 µg/kg) with a maximum concentration of 24 µg/kg. Metals were also detected in soil above the screening criteria including aluminum (12,100 mg/kg), arsenic (4.6 mg/kg), chromium (16.9 mg/kg), iron (13,300 mg/kg), and vanadium (66.6 mg/kg). For groundwater, concentrations of VOCs and SVOCs were below the screening values. Metals were detected in ground water above the screening

values including aluminum (8,460 micrograms per liter [µg/L]), chromium (10.9 µg/L), iron (31,500 µg/L), and manganese (1,280 µg/L).

The results of the Human Health Risk Screening indicated that there were potential human health risks from exposure to subsurface soil and groundwater at the site. However the individual constituents were reviewed based on the appropriate screening levels and comparison to background ranges and human nutrient requirements and it was concluded that there was no human health risk to site media.

The results of the Ecological Risk Screening indicated that there was no unacceptable risk to ecological receptors from subsurface soil or groundwater.

4. UST Release Descriptions

A previously abandoned 10,000 gallon UST, which was used to for heating oil, was located approximately 100 feet southeast of the current UST on the northeast side of Building AS705. In 1994, as part of the abandonment process, the tank was steam cleaned and filled with concrete slurry. In April 1995 ERC Engineering, Inc. issued a tank closure report, but it is not clear if this report was submitted to NCDENR. During UST closure activities there was no evidence of a petroleum release. Field screening was conducted with a flame ionization detector and all measured readings were less than 10 parts per million (ppm). Soil and groundwater samples were not collected for laboratory analysis (ERC, 1995).

During other work at Building AS705, the abandoned UST was uncovered on August 15, 2011. Osage Environment, Inc. was contacted and an Initial Abatement Action Report was generated (Core Consulting and Osage, 2012). The UST was previously filled to approximately 95% capacity with concrete. There was some residual heating oil located on top of the concrete at the time of this discovery. The residual oil was pumped off and the exposed interior was steam cleaned. The tank could not be removed due to the proximity to building AS705, so the remaining void was filled with concrete and the UST topped with clean fill.

Soil samples were collected around the perimeter of the UST along with the installation of a permanent groundwater monitoring well to investigate whether a petroleum release occurred. The analytical results from the soil samples revealed that only benzo(a)pyrene exceeded the soil to groundwater (STGW) and Residential maximum soil contaminant concentration (MSCCs). There were no other detected VOCs, SVOCs, or Massachusetts Department Environmental Protection (MADEP) compounds which exceeded STGW, Residential or Industrial MSCCs. The groundwater sample was analyzed using EPA 602, EPA 625, and MADEP methods. No compounds were detected above the laboratory detection limits for these methods.

On December 20, 2012, NCDENR issued a letter confirming No Further Action for the AS705 heating oil tank (Incident No. 32754).

5. Brief Description of Site Characteristics

The UST AS705 was located on MCAS New River of MCIEAST-MCB CAMLEJ (**Figure 1**). The site is located in a grassy area with a wooded area and wetlands to the north and west, an asphalt parking lot to the east, and Bachelor Officer's Quarters (Building AS705) to the south.

There are no water supply wells within 1500 feet of the site.

The following sections briefly discuss the site topography and hydrogeologic setting.

Topography

The project area has relatively flat topography that slopes gently to the north. The nearest mapped surface water body is Strawhorn Creek, a small tributary of the New River, located approximately 280 feet north from the UST location.

Regional Geology and Hydrogeology

The site lies within the Tidewater region of Coastal Plain Physiographic Province of North Carolina, where large streams and many of their tributaries are affected by ocean tides. Underlying the site is the Belgrade Formation which is comprised of the Pollocksville member and the Haywood Landing member (Rhodes, 1985). The Pollocksville member is characterized by oyster shell mounds in a sand matrix. The Haywood Landing member is characterized by fossiliferous clayey sand. The predominant soil type at this site is sandy silt to clayey silt of Quaternary surficial deposits. A discontinuous layer of black peaty soil with some sand and partially decayed wood fragments is present within the sandly silt from approximately 2 to 5 feet below ground surface (bgs) along southeast and southwest sidewalls. It is suspected that this material may be part of the landscaping debris disposed of at Site 42 (Building 705 Bachelor Officer's Quarters Dump). The depth to the underlain Tertiary Castle Hayne limestone/sand is unknown, but is estimated to be more than 30 feet.

The nearest mapped surface water body is Strawhorn Creek located approximately 280 feet north of the UST location. Strawhorn Creek flows easterly and discharges into the New River approximately 900 feet to the east of the UST site. Groundwater was encountered at approximately 5 feet bgs and the flow direction in the surficial aquifer is assumed to be to the north towards Strawhorn Creek.

C. UST CLOSURE REPORT (UST-12)

The following section describes the procedures and activities performed in order to complete the UST removal at Site AS705. A site layout showing the former UST location and other pertinent site features is presented in **Figure 2**. Photographs documenting the field activities are included in **Appendix A**.

1. Preparation

A Notification of Intent form (UST-3) to remove the USTs was submitted to NCDENR, Wilmington Regional Office by the MCB Camp Lejeune Environmental Management Division (EMD), and signed on November 25, 2013. A photocopy of the completed UST-3 form is provided in **Appendix B**. Upon completion of the removal, a Site Investigation Report (UST-2) was completed and is included in **Appendix C**.

A pre-construction meeting was held on November 12, 2013 with TtEC, Cape Environmental, EMD, Officer in Charge of Construction (OICC), and Base points of contact. North Carolina 811 was notified in advance of ground penetrating activities to perform a utility locate. In addition, a third party utility locator was subcontracted to perform a utility markout of the area on November 18, 2013.

Cape Environmental was subcontracted to perform UST removal activities using heavy equipment, including a rubber tired backhoe, an excavator, and a dump truck. The initial site preparation activities included:

- Examining the site to determine access to the proposed excavation area
- Delineation of the job site perimeter and work zones
- Location of all utilities within the project area
- Construction of soil and tank staging areas
- Placement of temporary fence/barricades surrounding the work area
- Procurement of required equipment and materials

Residual heating oil was removed from the UST by the Base in advance of UST removal activities. The tank was cleaned on January 7, 2014. A pressure washer was used to clean the tank interior and the residual fuel/water mix was removed using a vacuum truck. The tank was triple-rinsed to ensure removal of residual material.

2. Closure Procedure

UST removal activities began on January 10, 2014, with the removal of product lines. The product lines were previously drained and consisted of a 3/4-inch high density polyethylene (HDPE) supply and return line encased in a 4-inch flexible sleeve. The product lines ran approximately 35 feet from the UST manway, where they were cut from the previously removed portion of piping. On January 14, 2014, the concrete and overburden material was removed. A North Carolina Licensed Professional Geologist (PG) was present to oversee the onsite removal activities. The concrete pad was 12 feet wide by 22 feet long by 8 inches thick. The overburden material was staged adjacent to the excavation area on poly-sheeting with a berm for containment. The top of the tank was encountered approximately 3 feet bgs. Groundwater was encountered at approximately 5 feet bgs.

Air monitoring via MultiRAE 4-gas meter was conducted for screening the overburden material, monitoring the work zone during the excavation process, and determining the oxygen content and lower explosive limit (O_2/LEL) of the tank interior. No visible staining or odors were present during the removal action. Readings inside the tank indicated an inert atmosphere. After determining the tank atmosphere was inert, the UST was removed on January 14, 2014 by Cape Environmental. An excavator was used to remove the tank from the excavation and place the UST on bermed poly-sheeting.

Following removal of the UST from the excavation, the outside of the tank was cleaned of excess soil, and the tank was visually inspected. The inspection did not identify any evidence of petroleum leakage. The brine solution from the UST interstitial was drained and pumped into a holding tank for disposal into the A-47 oil-water separator at Courthouse Bay.

Groundwater was observed at approximately 5 feet below ground surface and no further excavation was completed on the excavation bottom, once the UST was removed.

The initial round of soil confirmation samples was collected on January 14, 2014. A total of 15 soil confirmation samples were collected from the excavation sidewalls and pipe line trench, including 2 duplicates. The sample results indicated contaminated soil was present in four of the ten sidewall samples (AS705-UST-SW06, AS705-UST-SW07, AS705-UST-SW08, and AS705-UST-SW10) which were located along the southeast and southwest sidewalls. The southeast and southwest sidewalls were over-excavated by approximately 3 feet where contamination was found. The second round of confirmation sampling was performed on January 22, 2014 (AS705-UST-SW11, AS705-UST-SW11A, AS705-UST-SW12, AS705-UST-SW13, and AS705-UST-SW14). The results from the second round of soil sampling showed concentrations were below the soil to groundwater screening values and therefore additional excavation was not required. Soil sampling was performed in accordance with NCDENR UST Guidelines. The results of the analyses are discussed in **Section E**. The approximate extent of the final excavation is shown on **Figure 3**.

Due to encountering groundwater in the excavation at 5 feet bgs, soil samples were not collected in the excavation bottom. A monitoring well (AS705-MW01) was installed to collect a groundwater sample in the UST footprint. The monitoring well was installed on February 10, 2014 in accordance with North Carolina Administrative Code (NCAC) Title 15A Subchapter 2C .0108. The monitoring well construction record is provided in **Appendix D** and summarized in **Table 3**. A groundwater sample was collected on February 13, 2014 and shipped to Accutest Laboratories Southeast, Inc. (N.C. Certification No. 573) for analysis. The results of the analysis are discussed in **Section F**.

Following receipt of the soil confirmation sampling results, restoration activities commenced. Restoration in the location of the UST included common soil backfill topped with topsoil. The area was graded to match existing topography.

3. Residual Material

The remaining product within the UST and associated product lines was removed in advance of UST removal activities by the Base. The brine solution was drained from the interstitial space and containerized for disposal into the A-47 oil-water separator at Courthouse Bay. Approximately 75 gallons of brine solution was produced.

Approximately 70 linear feet of product line associated with UST AS705 was removed on January 10, 2014. The product line consisted of a 3/4-inch HDPE supply and return line encased in a 4-inch flexible sleeve. The product lines ran approximately 35 feet from the center of the UST to where the lines were cut from the previously removed piping. The UST was crushed on January 16, 2014 to destroy its integrity, and then disposed of at the ES&J facility located in Autryville, North Carolina. Approximately 4.29 tons of tank material was disposed of. **Appendix E** contains the weight ticket as certification of disposal of the tank.

The excavated soil was sampled and characterized as non-hazardous waste. The material was disposed of as petroleum contaminated soil at the ES&J Enterprises disposal facility. Approximately 62 tons of soil was loaded out for transportation and disposal as part of the AS705 UST removal.

D. INITIAL RESPONSE AND ABATEMENT ACTION

During UST removal activities, no soil staining or the presence of hydrocarbon odor was observed in the UST excavation. In addition, the UST itself showed no evidence of leaking. No free product was present in the excavation. A total of approximately 62 tons of soil were removed during UST removal activities.

Confirmation samples were collected and analyzed in accordance with the NCDENR Guidelines. Confirmation soil sample results indicated exceedances of Total Petroleum Hydrocarbons (TPH)-Diesel Range Organics (DRO) above 10 mg/kg in four of the ten initial soil sample locations. Over-excavation was completed and a second round of confirmation samples was collected and analyzed for VOCs and SVOCs via SW846-8260B, 8270D, 3550C, and MADEP Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH). The second round indicated that there were no concentrations above the soil to groundwater MSCCs in the second round samples collected from the sidewalls. Soil confirmation sample results are discussed further in **Section E**.

Since groundwater was encountered at 5 ft bgs in the UST excavation, a monitoring well was installed. A groundwater sample was collected and analyzed in accordance with the NCDENR Guidelines. The groundwater sample results indicated levels of C9-C22 Aromatics and 1-methylnapthalene above the NCAC 15A 2L .0202 standards.

E. EXCAVATION OF CONTAMINATED SOIL

1. Extent of Soil Contamination

The extent of soil contamination was localized around the AS705 UST on the southeast and southwest side of the excavation, but the source of the contamination cannot definitively be determined. The contamination seems to exist only within a thin localized band of organic rich material at 3 feet bgs. This material is likely from landscaping debris which was known to be disposed of in this area (Site 42) as described in Section B. TPH-DRO was present in the initial round of soil confirmation samples above 10 mg.kg. The sample locations and depths, tank system location, and excavation dimensions are indicated in the following sections of this report.

Soil sampling was conducted in accordance with NC UST guidance and facility guidelines. Soil samples were collected using soil grabbers and sterile disposable trowels. Immediately after collection, the samples were placed into a cooler and preserved on ice. Chain-of-Custody forms were completed for each of the sampling events and custody seals were placed on each cooler. Quality control samples included duplicate samples, trip blanks, matrix spike/matrix spike duplicates (MS/MSD), and temperature blanks.

2. Excavation Process

UST removal activities began on January 10, 2014, with the removal of product lines. Removal of concrete and overburden material was completed on January 14, 2014. A North Carolina Licensed PG was present to oversee the onsite removal activities. The overburden material was staged adjacent to the excavation area on poly-sheeting with a berm for containment.

The UST was removed on January 14, 2014 and staged on bermed poly-sheeting separate from the overburden material. An excavator was used to remove the tank from the excavation. Groundwater was observed at approximately 5 feet below ground surface and no further excavation was completed beyond the water table. Over-excavation of the southeast and southwest sidewalls was conducted after receiving the initial sampling results. After the second round of confirmation sampling, the results indicated there were no exceedances of the soil to groundwater MSCCs. The final excavation dimensions are shown in **Figure 3**. The excavated material was staged in a bermed lined area with poly-sheeting separate from the overburden material.

3. Post-Excavation Confirmation Sampling

Tables 4 and **5** summarize the samples collected, date and time collected, source areas, sampling methods, and analytical results. Following excavation activities, confirmation soil samples were collected from the tank excavation sidewalls and beneath the piping. Sample locations are shown on **Figure 3**. The locations of confirmation samples were mapped using a hand held GPS device and their coordinates are included in **Appendix F**. A sampling matrix, detailed analysis, and

laboratory reports (with photocopies of chains-of-custody) are included in **Appendix G**. Quality control samples for soils included duplicate samples, MS/MSDs, and temperature blanks.

4. Soil Investigation

UST Excavation Samples

On January 14, 2014 during the first round of confirmation sampling, 10 sidewall soil samples were collected (AS705-UST-SW01 through AS705-UST-SW10) from the excavation sidewalls along with 2 duplicate samples (AS705-UST-SW06A and AS705-UST-SW09A) as shown on **Table 4.** The AS705 UST sidewall samples were collected from approximately 4 to 5 feet bgs (groundwater encountered at about 5 feet bgs). No soil samples were collected from the excavation bottom because groundwater was encountered.

After over-excavation, a second round of sidewall soil samples (AS705-UST-SW11 through AS705-UST-SW14) was collected on January 22, 2014. The sample locations were approximately 3 feet from the initial sample locations where results indicated TPH-DRO concentrations greater than 10 mg/kg.

The first round of soil samples were analyzed for TPH-Gasoline Range Organics (GRO), TPH-DRO, and percent solids. The second round of soil samples were analyzed for VOCs (EPA SW846 8260B), SVOCs (EPA SW846 8270D 3550C), MADEP EPH, and MADEP VPH. The analytical results are included in **Table 4**.

Piping Excavation Samples

The initial sampling event included 3 samples (AS705-UST-PL02 through AS705-UST-PL04) collected from beneath the product piping from 2 to 4 feet bgs. These samples were collected on January 14, 2014. No sample was collected from the AS705-PL01 location since its pre-excavation location was within the excavation area. Sample results are included in **Table 4**.

Soil Sample Results

The results of initial round soil samples indicated concentrations ranging from non-detect to 4.55 mg/kg for TPH-GRO and non-detect to 190 mg/kg for TPH-DRO. The soil samples with TPH-DRO concentration above 10 mg/kg were AS705-UST-SW06 (19.6 mg/kg), -SW07 (190 mg/kg), -SW08 (44.5 mg/kg) and -SW10 (19.1 mg/kg). These locations with elevated concentrations were on the southeast and southwest sidewalls **(Figure 3).**

The second round of soil samples was collected and analyzed for VOCs (EPA SW846 8260B), MADEP VPH, MADEP EPH, and SVOCs (EPA 846 8270D & 3550C). Acetone was detected in three samples (AS705-UST –SW11, AS705-UST –SW12, and AS705-UST-SW14) and sec-butylbenzene was detected in one sample (AS705-UST-SW11) with maximum concentrations of 0.58 mg/kg and 0.0011 mg/kg respectively. Benzo(a)pyrene and pyrene were detected at AS705-UST-SW13 at concentrations of 0.0408 and 0.0694 mg/kg. There were no detections for

MADEP VPH or MADEPH EPH. None of these concentrations exceeded the soil to groundwater or residential MSCCs.

5. Disposal of Contaminated Soil

One five-point composite soil sample of the excavated material was collected on January 22, 2014 for disposal characterization analysis. One sample (AS705-UST-SP01) was analyzed for 8260B, TPH-GRO, SVOCs, herbicides, pesticides, metals, polychlorinated biphenyls (PCBs), and TPH-DRO + Resource Conservation and Recovery Act (RCRA) characteristics needed for disposal.

The results of the stockpiled excavation material sample indicated that the material was non-hazardous and suitable for disposal at ES&J Enterprises, Inc., located at 1555 Holland Road, Autryville, NC. The soil was shipped on February 6, 2014. Photocopies of the completed waste transportation and disposal manifests are included in **Appendix H**. The fiberglass UST and piping were purged, cleaned, and disposed of at ES&J Enterprises, Inc. A photo copy of the completed tank disposal manifest is included in **Appendix E**.

F. GROUNDWATER INVESTIGATION

1. Investigative Actions

Groundwater was encountered in the AS705 UST excavation at approximately 5 feet bgs. No free product was observed. A permanent groundwater monitoring well (AS705-MW01) was installed according to Title 15A NCAC 2C within the excavation footprint. Installation was performed on February 10, 2014, and well development was performed on February 11, 2014. On February 13, 2014, the well was sampled using low-flow sampling methods.

Dedicated polyethylene and silicone tubing was used for groundwater sampling. Immediately after collection, the samples were placed into a cooler and preserved on ice. A Chain-of-Custody forms were completed for the sampling events and tamper seal tape was placed on each cooler. Quality control samples included a duplicate sample, trip blanks, a MS/MSD, and temperature blanks.

2. Groundwater Investigation

Groundwater Sampling Information

The permanent well was sampled using a peristaltic pump and field measurements were collected using a Horiba multi-parameter meter. Field measurements were recorded during the purging and included temperature, specific conductivity, dissolved oxygen, oxidation reduction potential, and pH. Monitoring well sampling records are included in **Appendix F**. The groundwater sample was analyzed for EPA 602 with xylenes, MADEP VPH, MADEP EPH, EPA 625, and EDB EPA 504. A trip blank was included as a quality control measure.

Groundwater Investigation Results

The results of the groundwater sample (AS705-MW01) indicated exceedances of the NCAC 15A Subchapter 2L .0202 Groundwater Standards for C9-C10 aromatics (200 µg/L), C11-C22 aromatics (200 µg/L), and 1-methylnapthalene (1 µg/L). The concentrations observed in groundwater were C9-C10 aromatics at 250 µg/L, C11-C22 aromatics at 367 µg/L, and 1-methylnaphthalene at 5.6 µg/L. The remaining detections were at concentrations below the NCAC 15A 2L .0202 standards. The sample results are summarized in **Table 5** and the laboratory analytical report is included in **Appendix G**.

G. CONCLUSIONS

Between January 10, 2014, and March 3, 2014, one 10,000 gallon UST (AS705), its associated piping, and approximately 62 tons of soil were removed from the Building AS705 area, MCAS New River, North Carolina. The UST previously contained #2 fuel oil. During the removal activities, there was no visual evidence of the tank leaking. However, hydrocarbons were detected in the initial round of confirmation samples from a layer of organic material at approximately 3 feet bgs along the southeast and southwest sidewalls. Over-excavation at locations with TPH-DRO greater than 10 mg/kg was completed and the second round of soil sampling indicated concentrations were below the residential MSCCs.

Groundwater was encountered at 5 feet bgs in the AS705 excavation and sampling was not possible below the UST. A groundwater monitoring well was installed within the footprint of the excavation and sampled. Sample results indicated concentrations of C9-C22 aromatics and 1-methylnaphthalene above the NC 2L standards. However, the concentration of 1-methylnaphthalene (5.6 µg/L) was below the Gross Contaminant Level (GCL) of 1,000 µg/L. A Risk Classification and Land Use Form is included in **Appendix I** which will allow NCDENR to formerly assign a Risk Classification and Land Use designation.

Based on the information provided in this report, it is believed that the intent and requirements of a Limited Site Assessment (LSA) have been met. The site should be considered Low Risk with soil concentrations below the residential MSCCs and GCLs for groundwater. Based on the recent soil and groundwater sampling results, no further action is recommended for soil and a Notice of Residual Petroleum (NRP) and Land Use Restrictions (LUR) is recommended for groundwater as contaminants are present above the NC 2L standards.

H. REFERENCES

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TABLES

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Tables

Table 1: Site History - UST/AST Owner/Operator and Other Responsible Party Information

Revision Date: 3/18/14 Incident Number and Name: AS705 UST Closure

UST ID Number	AS705	Facility ID Number	OU-0-0000002740
Name of Owner		Dates of Operation (mm/dd/yy to mm/dd/yy)	
Commanding General, MCIEAST-MCB CAMLEJ, G-F/EMD/EQB		November 1994 to January 2014	
Street Address			
12 Post Lane			
City	State	Zip	Telephone Number
Camp Lejeune	NC	28547	910-451-9017
Name of Operator		Dates of Operation (mm/dd/yy to mm/dd/yy)	
Marine Corps Air Station New River Bachelor Officer Quarters		November 1994 to January 2014	
Street Address			
AS705 Flounder Road			
City	State	Zip	Telephone Number
MCAS NR, Jacksonville	NC	28540	910-451-9017
Incident Number			
Name of Other Responsible Party		Dates of Release(s) (mm/dd/yy to mm/dd/yy)	
Jenni Reed		None	
Street Address			
City	State	Zip	Telephone Number

Add additional records for all owners, operators and responsible parties as necessary.

Table 2: Site History – UST/AST System and Other Release Information

Revision Date: 3/18/14 Incident Number and Name: AS705 UST Closure

UST ID Number	Current/Last Contents *	Previous Contents *	Capacity (in gallons)	Construction Details **	Tank Dimensions	Description of Associated Piping and Pumps	Date Tank Installed	Status of UST ***	Was release associated with the UST System?
AS705	No. 2 Fuel Oil	No. 2 Fuel Oil	10,000	Double Walled Fiberglass	9.5' x 19.5'	Underground product line and dispenser	November 1994	Permanently Closed by Removal (1/14/14)	Yes

Add additional records as necessary

AST ID Number	Current/Last Contents *	Previous Contents *	Capacity (in gallons)	Construction Details **	Tank Dimensions	Description of Associated Piping and Pumps	Date Tank Installed	Status of AST ***	Was release associated with the AST System?

Add additional records as necessary

Incident Number	Material Released	Date of Release	Description of Release

Add additional records as necessary

* Gasoline (unleaded or leaded), diesel, used oil, waste oil, aviation fuel, etc., or pesticides, non-halogenated or halogenated solvents, etc.

** Fiberglass (single- or double-walled), steel (single- or double-walled), steel with FRP (single- or double-walled), steel with liner, other, unknown.

*** Currently operational, not in use or temporarily closed (specify date), permanently closed in place (specify date), permanently closed by removal (specify date)

Table 3: Monitoring and Remediation Well Construction Information

Revision Date: 3/18/14 Incident Number and Name: AS705 UST Closure Facility ID#: OU-0-0000002740

Well ID	**Date Installed** (m/dd/yy)	**Date Water Level Measured** (m/dd/yy)	**Well Casing Diameter (in.)**	**Well Casing Depth** (ft. BGS)	**Screened Interval** (x to y ft. BGS)	**Depth of Well** (ft. BGS)	**Top of Casing Elevation*** (ft.)	**Depth to Water from Top of Casing** (ft.)	**Free Product Thickness **** (ft.)	**Groundwater Elevation*** (ft.)	**Latitude/ Longitude (decimal degrees)*****
AS705-MW01	02/10/14	02/10/14	2	14	4 to 14	14	0	4.3	N/A	-4.3	34.4323516 N/ -77.255497 W

Ft BGS = feet below ground surface

* Reference Point for Elevation Measurements top of casing , Assumed Elevation: 0 ft.

** If free product is present in a well, groundwater elevation is calculated by: [Top of Casing Elevation - Depth to Water] + [free product thickness x 0.8581]

*** The location must be sufficiently accurate and precise to allow easy recovery of lost or damaged wells.

Table 4: Summary of Soil Sampling Results

Revision Date: 3/18/14 Incident Number and Name: AS705 UST Closure Facility ID#: OU-0-0000002740

Analytical Method (e.g., VOC by EPA 8260) →						EPA 8015C	EPA 8015C	SW846 8270D & 3550C			MADEP VPH Rev 1.1 SW846 3546	MADEP EPH Rev 1.1 SW846 3546	EPA SW846 8260B		
Contaminant of Concern →						TPH DRO (mg/kg)	TPH GRO (mg/kg)	Benzo(a)pyrene (mg/kg)	Pyrene (mg/kg)	All Other SW846 8270D & 3550C Compounds	All Other MADEP EPH Rev 1.1 SW846 3546 Compounds	All Other MADEP EPH Rev 1.1 SW846 3546 Compounds	Acetone (mg/kg)	sec-Butylbenzene (mg/kg)	All Other SW846 8260B Compounds
Sample ID	**Date Collected** (m/dd/yy)	**Source Area** (eg. Tank pit 1)	**Sample Depth** (ft BGS)	**Incident Phase** (Closure, 20Day, LSA, etc.)											
AS705-UST-PL02	1/14/2014	Beneath Product Line	3.5	Closure		6.94	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-PL03	1/14/2014	Beneath Product Line	3.5	Closure		4.91 J	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-PL04	1/14/2014	Beneath Product Line	2.5	Closure		7.54	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW01	1/14/2014	Tank Pit Side Wall	4.5	Closure		BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW02	1/14/2014	Tank Pit Side Wall	4.5	Closure		BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW03	1/14/2014	Tank Pit Side Wall	4.5	Closure		BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW04	1/14/2014	Tank Pit Side Wall	4.5	Closure		BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW05	1/14/2014	Tank Pit Side Wall	4.5	Closure		5.17	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW06	1/14/2014	Tank Pit Side Wall	4.5	Closure		**19.6**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW06A	1/14/2014	Side Wall - Duplicate	4.5	Closure		**19**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW07	1/14/2014	Tank Pit Side Wall	4.5	Closure		**190**	4.55 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW08	1/14/2014	Tank Pit Side Wall	4.5	Closure		**44.5**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW09	1/14/2014	Tank Pit Side Wall	4.5	Closure		BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW09A	1/14/2014	Side Wall - Duplicate	4.5	Closure		BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW10	1/14/2014	Tank Pit Side Wall	4.5	Closure		**19.1**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW11	1/22/2014	Tank Pit Side Wall	4.5	Closure - Rnd 2 sample		N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	0.0167	0.0011	BMDL
AS705-UST-SW11A	1/22/2014	Side Wall - Duplicate	4.5	Closure - Rnd 2 sample		N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL
AS705-UST-SW12	1/22/2014	Tank Pit Side Wall	4.5	Closure - Rnd 2 sample		N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	0.0374	BMDL	BMDL
AS705-UST-SW13	1/22/2014	Tank Pit Side Wall	4.5	Closure - Rnd 2 sample		N/A	N/A	0.0408	0.0694	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL
AS705-UST-SW14	1/22/2014	Tank Pit Side Wall	4.5	Closure - Rnd 2 sample		N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	0.58	BMDL	BMDL
NCDENR Action Limit MSCC (mg/kg)						10	10								
Soil to groundwater MSCC (mg/kg)						Not Listed	Not Listed	0.096	270	Varies	Varies	Varies	24	3.3	Varies
Residential MSCC (mg/kg)						Not Listed	Not Listed	0.088	469	Varies	Varies	Varies	14000	626	Varies
Industrial/Commercial MSCC (mg/kg)						Not Listed	Not Listed	0.78	12264	Varies	Varies	Varies	360000	16350	Varies

Include in the table all of the target analytes listed for the method in App. B of the Guidelines for Sampling, current version.
MSCC = maximum soil contaminant concentration
ft. BGS = feet below ground surface
mg/kg =milligrams per kilogram
J=Indicates an estimated value

BMDL=Below Method Detection Limit
Highlighted values >= NCDENR Action Limit
N/A = Not applicable. Sample not tested for this analyte

Table 5: Summary of Groundwater and Surface Water Sampling Results

Revision Date: 3/18/14 Incident Number and Name: AS705 UST Closure Facility ID#: OU-0-0000002740

Analytical Method (e.g., VOC by SM6000B) or Field Measurement (FM) →			EPA 504.1	MADEP VPH Rev 1.1			MADEP EPH Rev 1.1 SW846 3510C			EPA 625								EPA 602
Contaminant of Concern →			Ethyl dimobride (EOB) (ug/l)	C5-C8 Aliphatics (ug/l)	C9-C12 Aliphatics (ug/l)	C9-C10 Aromatics (ug/l)	C11-C22 Aromatics (ug/l)	C9-C18 Aliphatics (ug/l)	C19-C36 Aliphatics (ug/l)	3&4 Methylphenol (ug/l)	Phenol (ug/l)	Acenapthene (ug/l)	Dimethyl phthalate (ug/l)	1-Methylnaphthalene (ug/l)	2-Methylnaphthalene (ug/l)	Total Tentatively Identified Compounds, Semi-Volatile ug/l)	All other EPA 625Target Analytes	All EPA602 Target Analytes
Well or SW ID	**Northing (feet)**	**Easting (feet)**																
AS705-MW01	292751.5	3812403.2	BMDL	BMDL	92.6 J	**250**	**367**	BMDL	BMDL	13.2	2.9 J	0.95 J	1.6 J	**5.6**	5.4	186	BMDL	BMDL
Minimum Reporting Limit (ug/l)			0.0097	35	35	35	140	93	93	1.9	1.9	0.94	1.9	0.94	0.94	varies	varies	varies
2L Standard (ug/l)			0.02	400	700	200	200	700	10000	40	30	80	600	1	30	varies	varies	varies

Field measurement parameters include temperature, pH, dissolved oxygen, specific conductivity, Eh, and alkalinity.
Indicate detection limit for contaminants when analyzed, but not detected (e.g., < 1, 10, 42)
Include in the table all of the target analytes listed for the method in App. B of the *Guidelines for Sampling*, current version.
Results must be reported in ug/l
ug/l =micrograms per liter GCL = gross contamination level
Highlighted values >= 2L Standard

FIGURES

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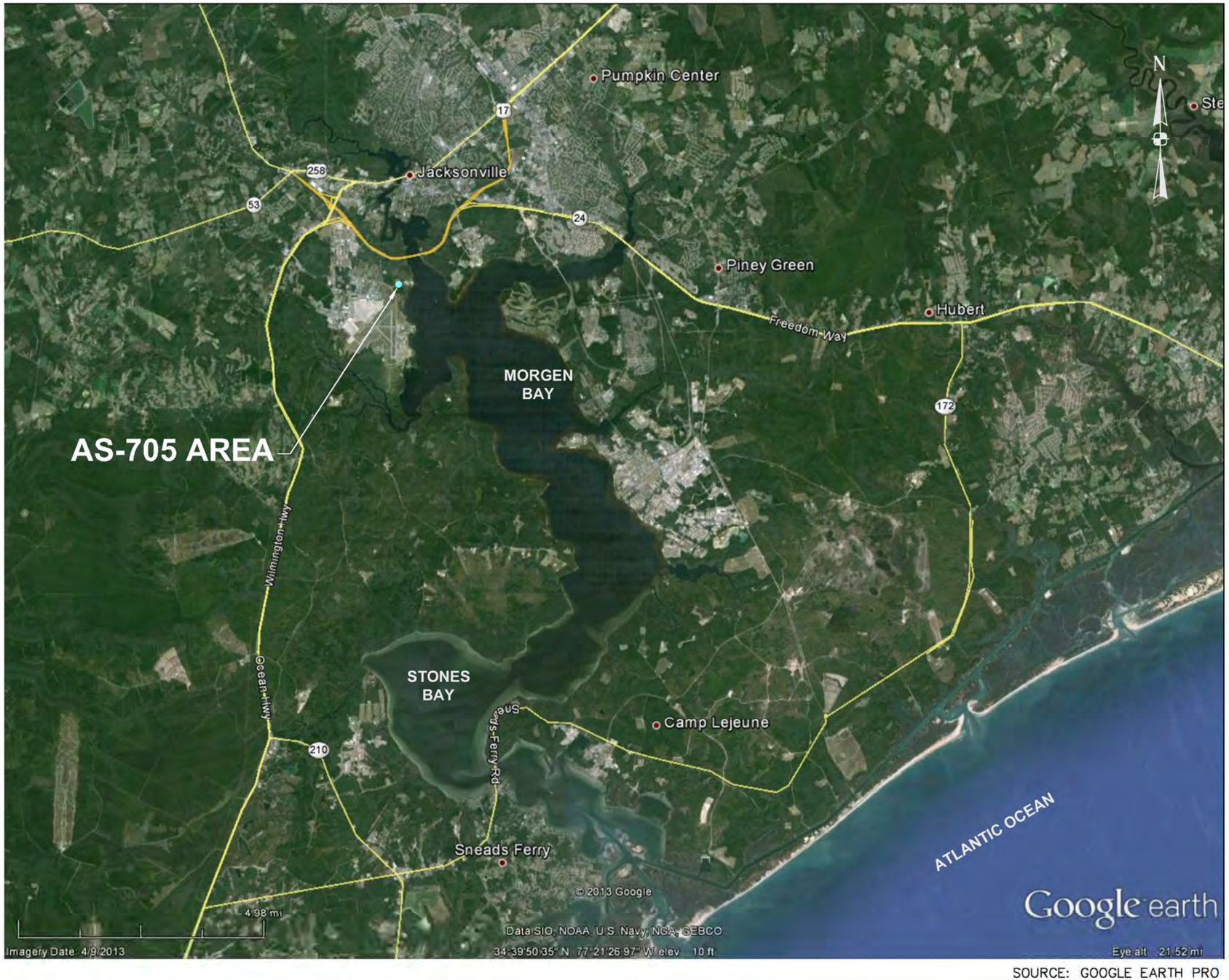


SOURCE: GOOGLE EARTH PRO

SOURCE: GOOGLE MAPS

BASE LOCATION MAP

CAD FILE: WE10-AS-702-FIGURE 1.DWG

TETRA TECH EC, INC.

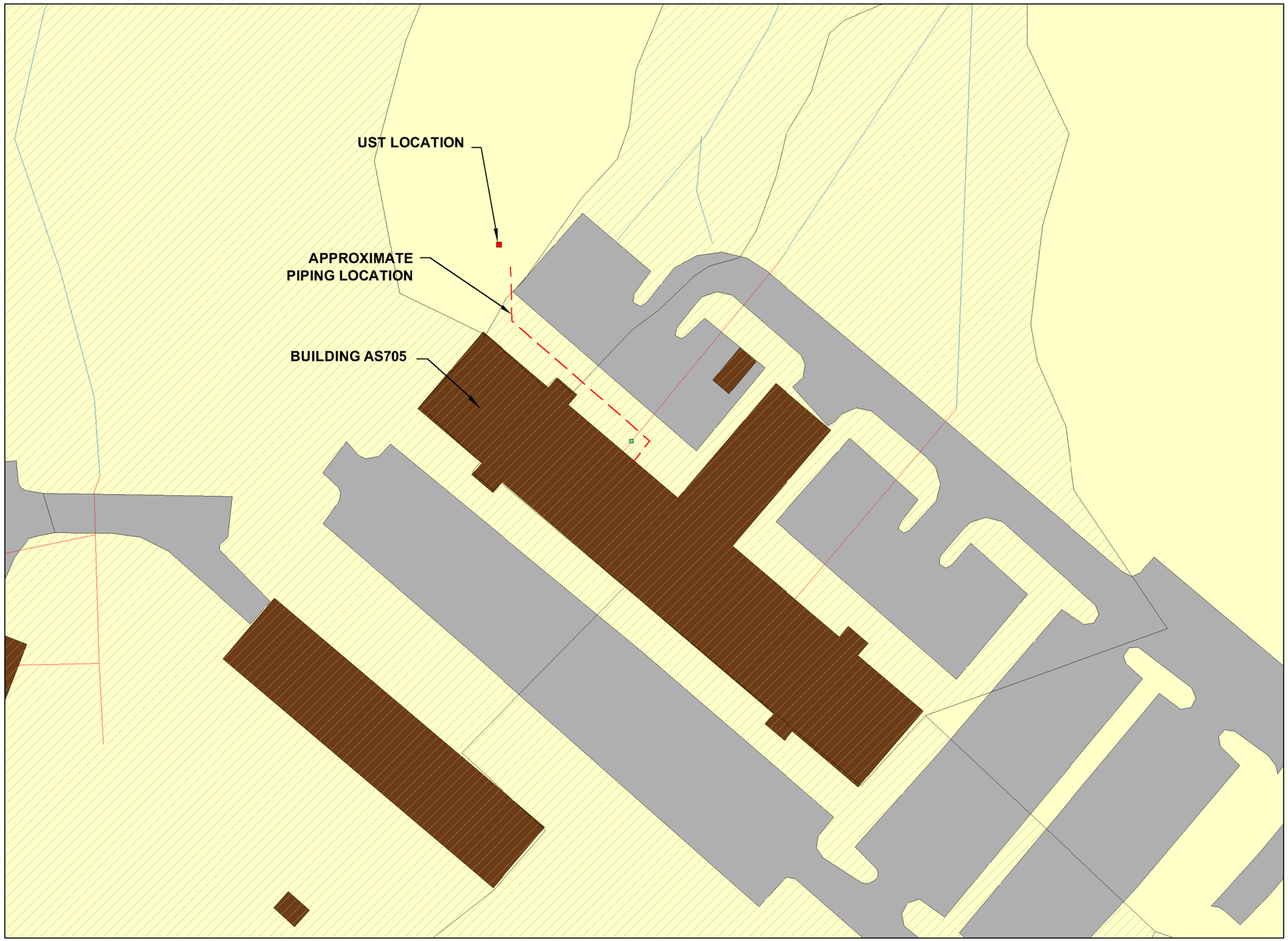
MARINE CORPS BASE CAMP LEJEUNE JACKSONVILLE, NORTH CAROLINA

SITE AS-705

LOCATION MAP

PREP	CHK	APPR	DATE
-	-	-	-

FIGURE 1



SOURCE: MARINE CORP INSTALLATIONS EAST MARINE CORPS BASE CAMP LEJEUNE GIS

CAD FILE: WE03-AS705-FIGURE-2_REV1.DWG

TETRA TECH EC, INC.

MARINE CORPS INSTALLATIONS EAST MARINE CORPS BASE CAMP LEJEUNE JACKSONVILLE, NORTH CAROLINA

UST REMOVAL

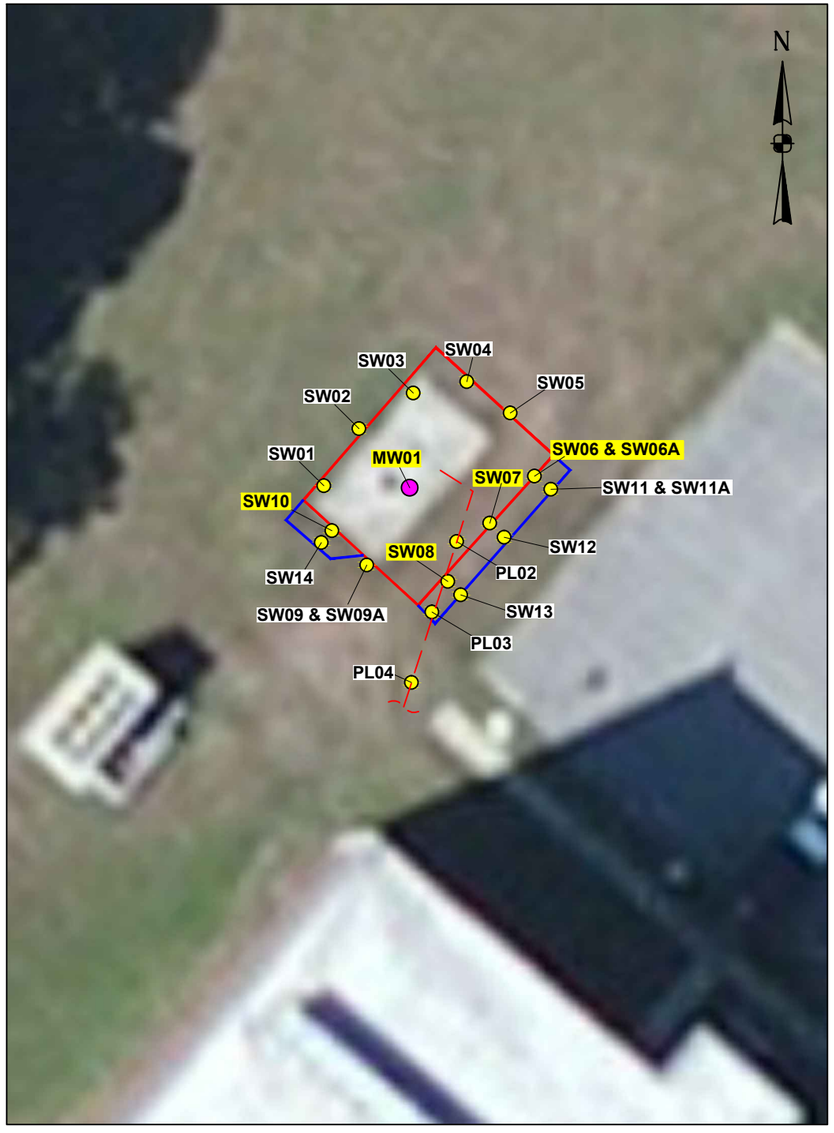
MARINE CORPS AIR STATION AS-705 UST AREA

SITE PLAN

PREP	CHK	APPR	DATE
-	-		-

FIGURE 2

LEGEND:
- AREA OF EXCAVATION
- AREA OF OVER EXCAVATION
- PRODUCT LINE REMOVED IN JAN 2014
- SOIL SAMPLE LOCATION POINT
- SAMPLE NOMENCLATURE: SW (SIDEWALL), PL (PRODUCT LINE)
- GROUNDWATER SAMPLE LOCATION POINT



SOURCE: MARINE CORP INSTALLATIONS EAST MARINE CORPS BASE CAMP LEJEUNE GIS

Analytical Method (e.g., VOC by EPA 8260)			EPA 8015C	EPA 8015C	SW846 8270D & 3550C			MADEP VPH Rev 1.1 SW846 3546	MADEP EPH Rev 1.1 SW846 3546	EPA SW846 8260B		
Contaminant of Concern →			TPH DRO (mg/kg)	TPH GRO (mg/kg)	Benzo(a)pyrene (mg/kg)	Pyrene (mg/kg)	All Other SW846 8270D & 3550C Compounds	All Other MADEP EPH Rev 1.1 SW846 3546 Compounds	All Other MADEP EPH Rev 1.1 SW846 3546 Compounds	Acetone (mg/kg)	sec-Butylbenzene (mg/kg)	All Other SW846 8260B Compounds
Sample ID	Northing (feet)	Easting (feet)										
AS705-UST-PL02	3845037.336	277314.891	6.94	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-PL03	3845034.501	277313.891	4.91 J	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-PL04	3845031.670	277313.071	7.54	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW01	3845039.579	277309.543	BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW02	3845041.878	277310.963	BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW03	3845043.316	277313.139	BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW04	3845043.769	277315.300	BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW05	3845042.510	277317.048	5.17	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW06	3845039.968	277318.018	**19.6**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW06A	3845039.968	277318.018	**19**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW07	3845038.080	277316.216	**190**	4.55 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW08	3845035.732	277314.536	**44.5**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW09	3845036.396	277311.270	BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW09A	3845036.396	277311.270	BMDL	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW10	3845037.779	277309.874	**19.1**	BMDL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AS705-UST-SW11	3845039.444	277318.680	N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	0.0167	0.0011	BMDL
AS705-UST-SW11A	3845039.444	277318.680	N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL
AS705-UST-SW12	3845037.512	277316.799	N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	0.0374	BMDL	BMDL
AS705-UST-SW13	3845035.198	277315.053	N/A	N/A	0.0408	0.0694	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL
AS705-UST-SW14	3845037.293	277309.450	N/A	N/A	BMDL	BMDL	BMDL	BMDL	BMDL	0.58	BMDL	BMDL
NCDENR Action Limit (mg/kg)			10	10								
Soil to groundwater MSCC (mg/kg)			Not Listed	Not Listed	0.096	270	Varies	Varies	Varies	24	3.3	Varies
Residential MSCC (mg/kg)			Not Listed	Not Listed	0.088	469	Varies	Varies	Varies	14000	626	Varies
Industrial/Commercial MSCC (mg/kg)			Not Listed	Not Listed	0.78	12264	Varies	Varies	Varies	360000	16350	Varies

BMDL= Below Method Detection Limit
N/A= Testing not performed for this analyte
J= Indicates an estimated value
PL= Product Line
SW= Side Wall
Highlighted items indicate values exceeding NCDENR Action Limit

Analytical Method (e.g., VOC by SM6000B) or Field Measurement (FM) →			EPA 504.1	MADEP VPH Rev 1.1			MADEP EPH Rev 1.1 SW846 3510C			EPA 625								EPA 602
Contaminant of Concern →			Ethyl dimobride (EOB) (ug/l)	C5-C8 Aliphatics (ug/l)	C9-C12 Aliphatics (ug/l)	C9-C10 Aromatics (ug/l)	C11-C22 Aromatics (ug/l)	C9-C18 Aliphatics (ug/l)	C19-C36 Aliphatics (ug/l)	3&4 Methylphenol (ug/l)	Phenol (ug/l)	Acenapthene (ug/l)	Dimethyl phthalate (ug/l)	1-Methylnaphthalene (ug/l)	2-Methylnaphthalene (ug/l)	Total Tentatively Identified Compounds, Semi-Volatile ug/l)	All other EPA 625 Target Analytes	All EPA602 Target Analytes
Well or SW ID	Northing (feet)	Easting (feet)																
AS705-MW01	292751.5	3812403.2	BMDL	BMDL	92.6 J	**250**	**367**	BMDL	BMDL	13.2	2.9 J	0.95 J	1.6 J	**5.6**	5.4	186	BMDL	BMDL
Minimum Reporting Limit (ug/l)			0.0097	35	35	35	140	93	93	1.9	1.9	0.94	1.9	0.94	0.94	varies	varies	varies
2L Standard (ug/l)			0.02	400	700	200	200	700	10000	40	30	80	600	1	30	varies	varies	varies

BMDL= Below Method Detection Limit
MW= Monitoring Well
J= Indicates an estimated value
Highlighted items indicate values exceeding 2L Standard

CAD FILE: WE03--AS705--FIGURE--3_REV1.DWG

TETRA TECH EC, INC.

MARINE CORPS INSTALLATIONS EAST MARINE CORPS BASE CAMP LEJEUNE JACKSONVILLE, NORTH CAROLINA

UST REMOVALS

SITE AS-705

EXCAVATION AND SAMPLE LOCATION MAP

PREP	CHK	APPR	DATE
-	-		-

FIGURE 3

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APPENDIX A

PHOTOGRAPHIC LOG

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TETRA TECH

Photographic Log

Log No. AS705-1

Project: UST Demolition
Project No.: WE03
Location: Camp Lejeune - Site AS705
Photographer: Gary Phelps

Photo # : 1
Date Taken: 11/19/13
Time Taken: 8:45 AM
Location: Site AS705

Photographer facing: West
Description: Pre-construction condition

Photo # : 2
Date Taken: 1/10/14
Time Taken: N/A
Location: Site AS705

Photographer facing: West-Southwest
Description: Breaking of concrete

Photo # : 3
Date Taken: 1/14/14
Time Taken: N/A
Location: Site AS705

Photographer facing: North-West
Description: Excavation of over-burden material.

TETRA TECH

Photographic Log

Log No. AS705-2

Project: UST Demolition Project No.: WE03

Location: Camp Lejeune - Site AS705

Photographer: Gary Phelps

Photo # : 4

Date Taken: 1/14/14

Time Taken: N/A

Location: Site AS705

Photographer facing: North

Description: UST removal

Photo # : 5

Date Taken: 1/22/14

Time Taken: N/A

Location: Site AS705

Photographer facing: South-West

Description: Open excavation

Photo # : 6

Date Taken: 1/14/14

Time Taken: N/A

Location: Site AS705

Photographer facing: North-East

Description: Confirmation sampling

TETRA TECH

Photographic Log

Log No. AS705-3

Project: UST Demolition

Project No.: WE03

Location: Camp Lejeune - Site AS705

Photographer: Gary Phelps

Photo # : 7

Date Taken: 2/6/14

Time Taken: N/A

Location: Site AS705

Photographer facing: West

Description: Backfill of UST excavation.

Photo # : 8

Date Taken: 3/3/14

Time Taken: N/A

Location: Site AS705

Photographer facing: West-Southwest

Description: Restored site

Photo # :

Date Taken:

Time Taken:

Location:

Photographer facing:

Description:

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APPENDIX B

UST-3 NOTIFICATION OF INTENT: UST PERMANENT CLOSURE

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UST-3 Notice of Intent: UST Permanent Closure or Change-in-Service

Return completed form to:
The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out.
SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY
I.O. #
Date Received

INSTRUCTIONS (READ THIS FIRST)

Complete and return at least **thirty (30) days** prior to closure or change-in-service activities. If a Professional Engineer (P.E.) or a Licensed Geologist (L.G.) provides supervision for closure or change-in-service site assessment activities and signs and seals all closure reports then at least a **five (5) working days** notice is acceptable.

Completed UST closure or change-in-service site assessment reports, along with a copy of the UST-2 form, should be submitted to the appropriate Division of Waste Management (DWM) Regional Office within thirty (30) days following closure activities. The UST-2 form should also be submitted to the Central Office in Raleigh so that the status of the tanks may be changed to permanently closed and your tank fee account can be closed out.

UST closure and change-in-service site assessments must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. The *Guidelines for Tank Closure* can be obtained at www.wastenotnc.org.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

I. OWNERSHIP OF TANKS

Owner Name (Corporation, Individual, Public Agency, or Other Entity) Commanding General, MCIEAST-MCB CAMLEJ, G-F/EMD/EQB	
Street Address 12 Post Lane	
City Camp Lejeune	County Onslow
State NC	Zip Code 28547
Phone Number (910) 451-9017	

II. LOCATION

Facility Name or Company Marine Corps Air Station New River Bachelor Officer Quarters		
Facility ID # (If known) 0U-0-0000002740		
Street Address AS705 Flounder Road		
City Camp Lejeune	County Onslow	Zip Code 28542
Phone Number		

III. CONTACT PERSONNEL

Name:	Company Name:	Job Title:	Phone Number:
Jenni Reed	MCIEAST-MCB CAMLEJ, G-F/EMD/EQB	Environmental Engineer	(910) 451-9017

IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE-IN SERVICE

1. Contact local fire marshal.
2. Plan entire closure event.
3. Conduct Site Soil Assessment.
4. If removing tanks or closing in place, refer to API Publication 2015 *Cleaning Petroleum Storage Tanks* and 1604 *Removal and Disposal of Used Underground Petroleum Storage Tanks.*
5. Provide a sketch locating piping, tanks and soil sampling locations.
6. Submit a closure report in the format of UST-12 (including the form UST-2) within thirty (30) days following the site investigation.
7. If a release from the tanks has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G. If a release has not occurred, the supervision, signature or seal of a P.E. or L.G. is not required.
8. Keep closure records for three (3) years.

V. WORK TO BE PERFORMED BY

Contractor Name: Tetra Tech EC, Inc.	Contractor Company Name: Tetra Tech, Inc.		
Address: 5250 Challedon Drive	State: VA	Zip Code: 23462	Phone No: (757) 518-8491
Primary Consultant Name: Robert Sok, P.G.	Primary Consultant Company Name: Tetra Tech, Inc.		Consultant Phone No: (757) 466-4904

VI. TANKS SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE

Tank ID No.	Size in Gallons	Last Contents	Proposed Activity: Closure – Removal	Proposed Activity: Closure – Abandonment in Place *	Proposed Activity: Change-In-Service – New Contents Stored
AS705	10000	Fuel Oil	☒	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	

* Prior written approval to abandon a tank in place must be received from a DWM Regional Office.

VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE

I understand that I can be held responsible for environmental damage resulting from the improper disposal of my USTs.

Print name and official title: John R. Townson, Director, Environmental Management

Signature	Date Signed	SCHEDULED REMOVAL DATE	Notify your DWM Regional Office 48 hours before this date if scheduled removal date changes
John R. Townson	11/25/13	January 9, 2014 through January 23, 2014	

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APPENDIX C

UST-2 SITE INVESTIGATION REPORT FOR PERMANENT CLOSURE OF UST

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UST-2 Site Investigation Report for Permanent Closure or Change-in-Service of UST

Return completed form to:
The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out.
SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY:
I.D. #_____
Date Received_____

INSTRUCTIONS (READ THIS FIRST)

For more than five UST systems you may attach additional forms as needed.

Permanent closure – For permanent closure, complete all sections of this form.

Change-in-service – For change-in-service where UST systems will be converted from containing a regulated substance to storing a non-regulated substance, complete sections I, II, III, IV, and VIII

Effective February 1, 1995, all UST closure/change-in-service reports must be submitted in the format provided in the UST-12 form. UST closure and change-in-services must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. A copy of the UST-12 form and the *Guidelines for Tank Closure* can be obtained at www.wastenotnc.org.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

I. OWNERSHIP OF TANKS

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
Commanding General, MCIEAST-MCB CAMLEJ, G-F/EMD/EQB

Street Address
12 Post Lane

City: Camp Lejeune
County: Onslow
State: NC
Zip Code: 28542

Phone Number
(910) 451-9017

II. LOCATION OF TANKS

Facility Name or Company
Marine Corps Air Station New River Bachelor Officer Quarters

Facility ID # (If known)
0U-0-0000002740

Street Address
AS705 Flounder Road

City: Camp Lejeune
County: Onslow
Zip Code: 28542

Phone Number

III. CONTACT PERSONNEL

Contact for Facility: Jenni Reed		Job Title: Environmental Engineer	Phone. No: (910) 451-9017
Closure Contractor Name: Tetra Tech EC, Inc.	Closure Contractor Company: Tetra Tech, Inc.	Address: 5250 Challedon Dr, Virginia Bch, VA	Phone. No: (757) 518-8491
Primary Consultant Name: Robert Sok, P.G.	Primary Consultant Company: Tetra Tech, Inc.	Address: 5700 Lakewright Dr,#309,Norfolk,VA	Phone. No: (757) 466-4904

IV. UST INFORMATION FOR REGISTERED UST SYSTEMS

V. EXCAVATION CONDITION

Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Change-in-Service Date	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
AS705	10000	9.5' x 19.5'	Fuel Oil	Unknown	1/14/14	N/A	☒	☐	☐	☒	☐	☒
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

VI. UST INFORMATION FOR UNREGISTERED UST SYSTEMS

VII. EXCAVATION CONDITION

Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Tank Owner Name *	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

* If the tank owner address is different from the one listed in Section I., then enter the street address, city, state, zip code and telephone no. below:

VIII. CERTIFICATION

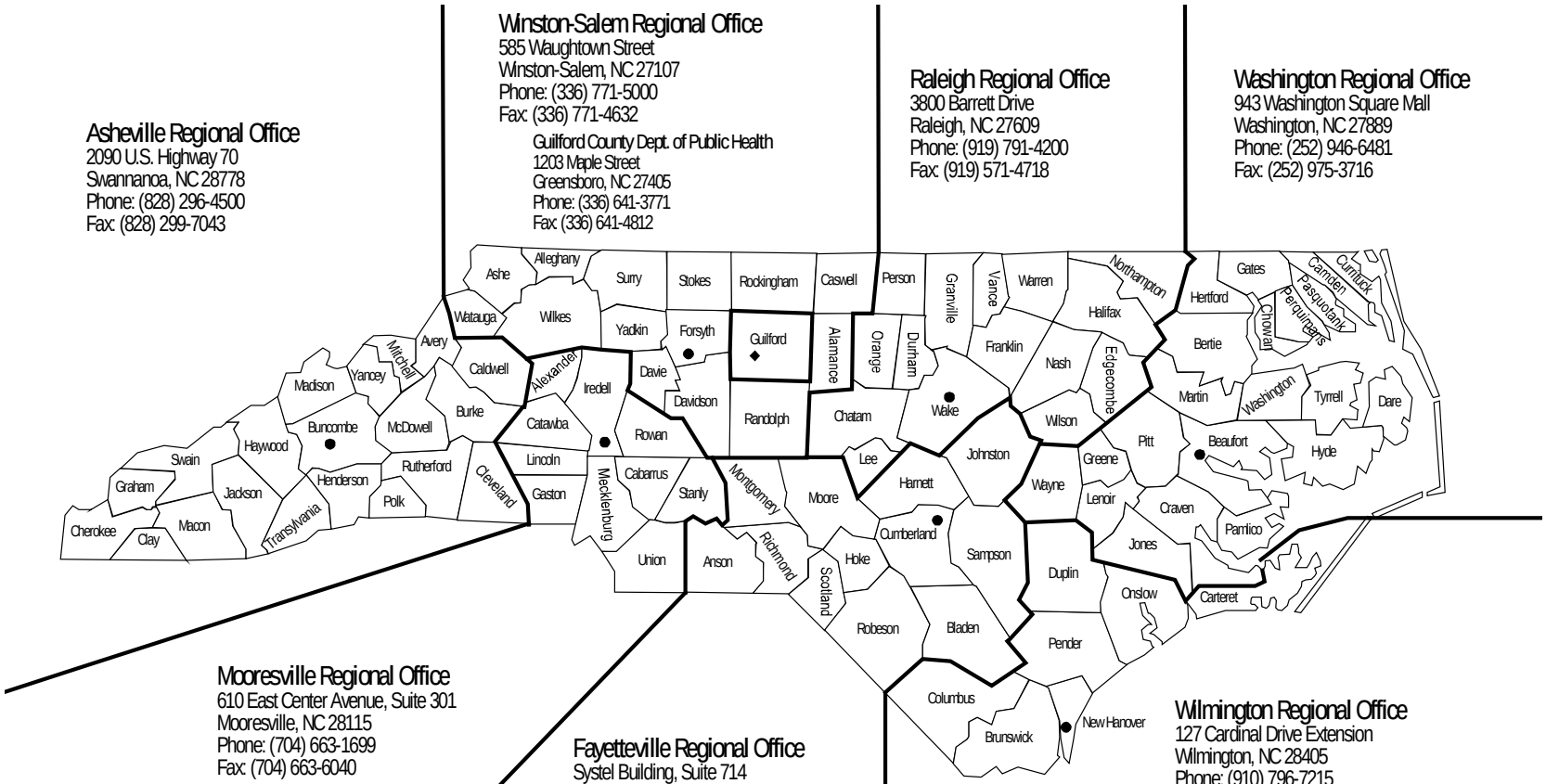
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true accurate and complete.

Print name and official title of owner or owner's authorized representative	Signature	Date Signed
John R. Townson, Director, Environmental Management		

NCDENR

North Carolina Department of Environment and Natural Resources

Division of Waste Management
UST Section Central Office
1637 Mail Service Center
Raleigh, NC 27699-1637
(919) 707-8171 FAX (919) 715-1117
portal.ncdenr.org/web/wm/



Asheville Regional Office
2090 U.S. Highway 70
Swannanoa, NC 28778
Phone: (828) 296-4500
Fax: (828) 299-7043

Winston-Salem Regional Office
585 Waughtown Street
Winston-Salem, NC 27107
Phone: (336) 771-5000
Fax: (336) 771-4632

Guilford County Dept. of Public Health
1203 Maple Street
Greensboro, NC 27405
Phone: (336) 641-3771
Fax: (336) 641-4812

Raleigh Regional Office
3800 Barrett Drive
Raleigh, NC 27609
Phone: (919) 791-4200
Fax: (919) 571-4718

Washington Regional Office
943 Washington Square Mall
Washington, NC 27889
Phone: (252) 946-6481
Fax: (252) 975-3716

Mooresville Regional Office
610 East Center Avenue, Suite 301
Mooresville, NC 28115
Phone: (704) 663-1699
Fax: (704) 663-6040

Fayetteville Regional Office
Systel Building, Suite 714
225 Green Street
Fayetteville, NC 28301
Phone: (910) 433-3300
Fax: (910) 486-0707

Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, NC 28405
Phone: (910) 796-7215
Fax: (910) 350-2004

● Regional Office

8/06

APPENDIX D

MONITORING WELL CONSTRUCTION RECORDS

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CATLIN
Engineers and Scientists

Post Office Box 10279
Wilmington, North Carolina 28404-0279

Telephone: (910) 452-5861
Fax: (910) 452-7563

www.catlinusa.com

February 25, 2014

North Carolina Department of Environment and Natural Resources
Division of Water Quality
Information Processing
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Re: NC Well Construction and/or Abandonment Record(s)
Sites 1932 and AS705
Jacksonville, North Carolina
CATLIN Project No.: 213159

To Whom It May Concern:

CATLIN Engineers and Scientists (CATLIN) recently constructed and/or abandoned well(s) at the above referenced site. Attached to this letter are completed North Carolina Well Construction Records and/or North Carolina Well Abandonment Records with associated Attachment(s) for the above referenced sites located in the vicinity of Jacksonville, North Carolina.

If you have any questions or require any additional information, please feel free to contact us at (910) 452-5861.

Sincerely,

Jeffery K. Becken, P.E.
Project Manager

Enclosures

cc: Mark Piscarik - Tetra Tech

S:\GINT\PROJECTS\213159_TETRA_TECH.GPJ,S:\WPMKTG\PROJECT\2013\213159 TETRA TECH FIELD SERVICES AT CAMP LEJEUNE\BB177-GW01_LOG-WELLCON-TRANS.GDW

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

William J. Miller
Well Contractor Name

2927A — NC Well Contractor Certification Number
AS705-MW01 — Well Identification

CATLIN Engineers and Scientists
Company Name

2. Well Construction Permit #: N/A
List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:
☐Agricultural ☐Municipal/Public
☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)
☐Industrial/Commercial ☐Residential Water Supply (shared)
☐Irrigation

Non-Water Supply Well:
■Monitoring ☐Recovery

Injection Well:
☐Aquifer Recharge ☐Groundwater Remediation
☐Aquifer Storage and Recovery ☐Salinity Barrier
☐Aquifer Test ☐Stormwater Drainage
☐Experimental Technology ☐Subsidence Control
☐Geothermal (Closed Loop) ☐Tracer
☐Geothermal (Heating/Cooling Return) ☐Other (explain under #4 Remarks)

4. Date Well(s) Completed: 2/10/2014

5a. Well Location:

Building AS705 — Facility/Owner Name
N/A — Facility ID# (if applicable)

AS-705 ~~BB127~~, Jacksonville
Physical Address, City, and Zip

Onslow — County
Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

34.4323516 N -77.255497 W

6. Is (are) the well(s): ■**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ■**No**
If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1
*For multiple injection or non-water supply wells **ONLY** with the **same construction**, you can submit one form.*

9. Total well depth below land surface: 14 (ft.)
For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: 4.3 (ft.)
If water level is above use "+"

11. Borehole diameter: 8.25 (in.)

12. Well construction method: H.S.A.
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm): _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	4 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
4 ft.	14 ft.	2 in.	Slot .010	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
ft.	ft.		
1.5 ft.	3.5 ft.	Bent. Pellets	Surface Pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		Surface Pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

SEE ATTACHED

21. REMARKS

22. Certification:

Signature of Certified Well Contractor — Date: 2-28-19

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 2C Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:
Also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

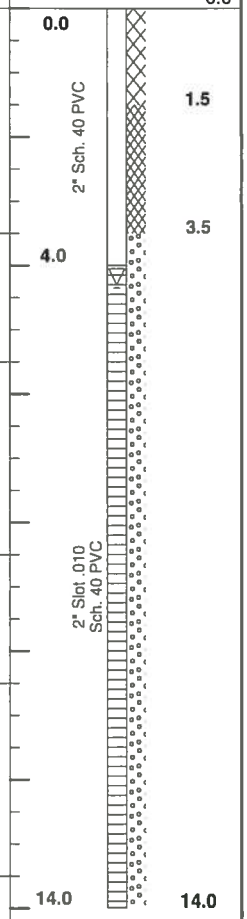
WELL LOG

CATLIN Engineers and Scientists
213159 Wilmington, NC

PROJECT NO.: 213159	STATE: NC	COUNTY: Onslow	LOCATION: Jacksonville
PROJECT NAME: Building AS705	LOGGED BY: Tetra Tech		WELL ID: AS705-MW01
	DRILLER: William J. Miller		
NORTHING:	EASTING:	CREW: Larry Wessell	
SYSTEM:	BORING LOCATION:		T.O.C. ELEV.:
DRILL MACHINE: CME-45B	METHOD: H.S.A.	0 HOUR DTW: 4.3	TOTAL DEPTH: 15.5
START DATE: 2/10/14	FINISH DATE: 2/10/14	24 HOUR DTW: N/A	WELL DEPTH: 14.0

DEPTH	BLOW COUNT 0.5ft	0.5ft	0.5ft	0.5ft	OVA (ppm)	LAB.	MOIS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION
									0.0	LAND SURFACE
3.5	2	1	1	1			W		3.5	(SP/SC) - Gray, SAND to Clayey SAND. BACKFILL
8.5	1	1	1	1			W		5.5	
									8.5	
13.5	3	3	2	2			W		10.5	(CL) - CLAY w/Gravel (backfill from tank) to Sandy SILT (Saturated). Root frags.
15.5									13.5	(SP/SM) - Gray, SAND to Silty SAND. Root frags.
									15.2	
									15.5	(CL) - Gray CLAY.
									15.5	Boring Terminated at Depth 15.5 ft

WELL DETAIL



Bentonite Grout Bentonite Pellets Coarse Gravel Pack

CATLIN BORING LOG 213159 TETRA TECH.GPJ CATLIN.GDT 2/25/14

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APPENDIX E

CERTIFICATE OF UST DISPOSAL

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ONSLOW COUNTY SOLID WASTE
415 MEADOWVIEW ROAD
JACKSONVILLE, NC 28540

000010 WASTE INDUSTRIES,INC.
21 EAST THOMPSON ST.
JACKSONVILLE NC 28540

SITE	TICKET	GRID	WEIGHMASTER
03	073309	LANDFILL	DONNA

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
02/06/14	02/06/14	10:30	10:49	610/2416	

REFERENCE	ORIGIN
CAPENVIROM	ONSLOW COUNTY

Scale 1 Gross Wt. 45520 LB
Scale 2 Tare Wt. 36940 LB
Net Weight 8580 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
4.29	TON	C&D	47.00	201.63	8.58	210.21

Cape Enviromental Management
0005349160

Operating hours 6:30 AM TO 5PM MON THRU SAT
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type, and originated in Onslow County.

NET AMOUNT
210.21
TENDERED
CHANGE
CHECK NO.

SIGNATURE

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APPENDIX F

SAMPLE LOGSHEETS AND GPS DATA

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APPENDIX F.1

SOIL SAMPLE LOGSHEETS

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Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-PL01
Sample Location: AS705-UST-PL01
Sampled By: JB
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:	No Sample		
Method: Disp. Trowel			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil		
TPH DRO and % moisture	1 4 oz jar		

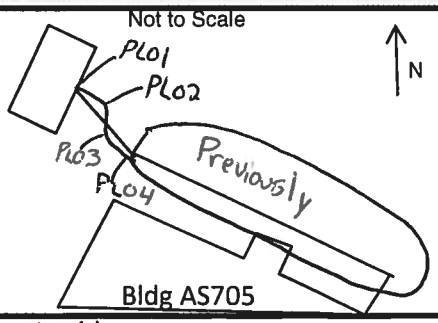
No Sample

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☐
Odors	☐	☐

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-PL02
Sample Location: AS705-UST-PL02
Sampled By: J. Birkett
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0850	~~2-3~~ 3-4' bgs	~~Brown~~ tan	F-M sand tr. silt Moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

OBSERVATIONS / NOTES:

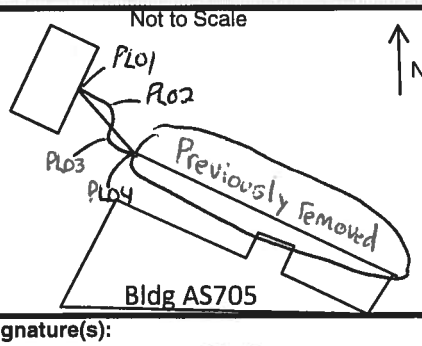
	Yes	No
Soil Staining	☐	☒
Odors	☒	☐

very slight petroleum odor

PL at ~ 3.5' bgs
Water table at 5' bgs

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST- PL03
Sample Location: AS705-UST- PL03
Sampled By: J. B.
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0855	3-4' bgs	Brownish gray	F-M sand tr. silt and C. sand wet due to rain
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

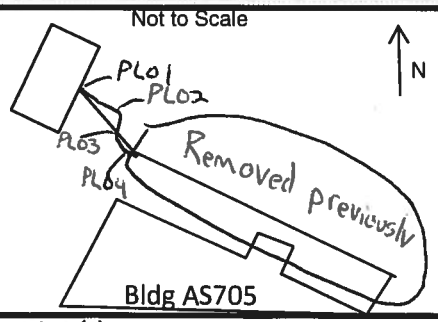
Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

J. Baldock

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-PL04
Sample Location: AS705-UST-PL04
Sampled By: JB
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0850	2-3' bgs	Brown	F-M sand tr. to some silt very few gravel wet due to rain
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

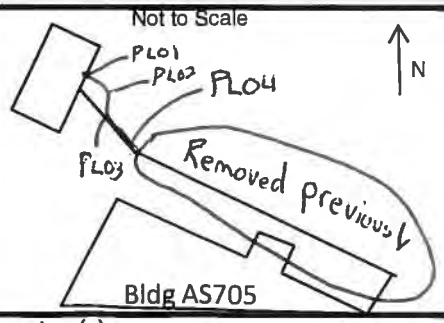
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	Yes	
TPH DRO and % moisture	1 4 oz jar	yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
____	

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW01
Sample Location: AS705-UST- SW01
Sampled By: J. Birkett, J. Galler
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	4-5' bgs	tan to brn	F-M sand tr. silt and C. sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

OBSERVATIONS / NOTES:

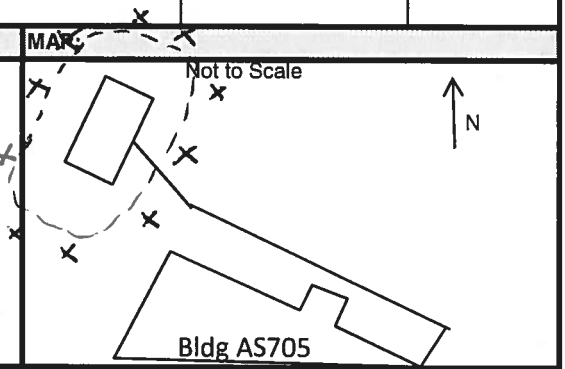
	Yes / No
Soil Staining	[] [X]
Odors	[] [X]

Water table ~5' bgs

SW01

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW02
Sample Location: AS705-UST-SW02
Sampled By: J. Birkett, J. Galler
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045	4-5' bgs	tan to brn	F-M sand tr. silt and C. sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	Yes	
TPH DRO and % moisture	1 4 oz jar	yes	

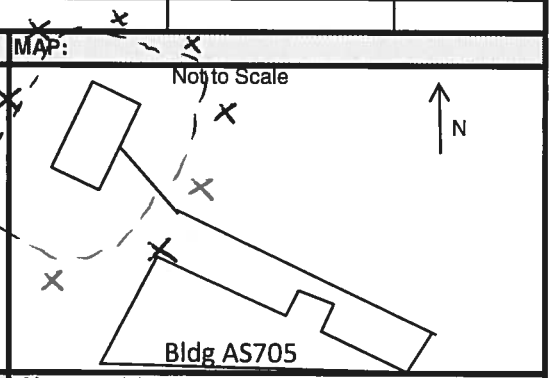
OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	[ ] [X]
Odors	[ ] [X]

Water table ~5' bgs

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW03
Sample Location: AS705-UST-SW03
Sampled By: J Birkett and J. Geller
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1050	4-5' bgs	tan to brn	F-M sand tr. silt and C sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

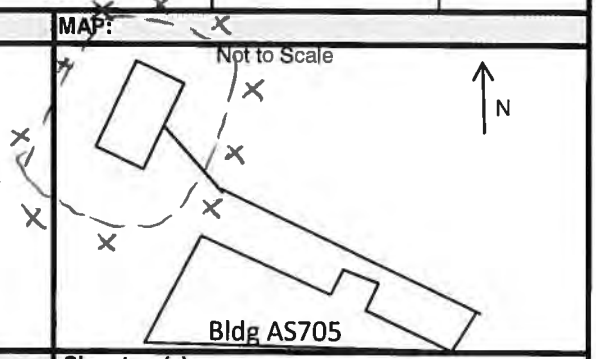
Analysis	Container Requirements	Collected	Other
TPH GRO	6 MeOH 40 mL vials with 5g soil	Yes	
TPH DRO and % moisture	3 4 oz jar	Yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

Water table ~ 5' bgs

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW04
Sample Location: AS705-UST-SW04
Sampled By: J. Galler J. Birkett
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1056	4-5' bgs	tan	F-M sand tr. silt and C. sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

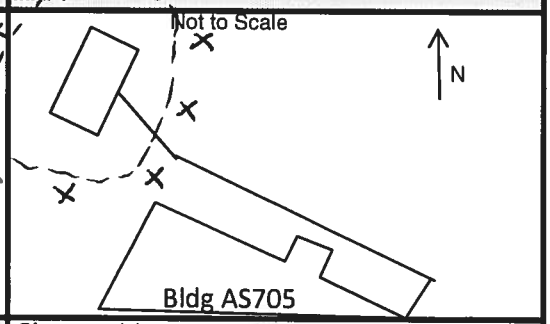
Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	
	SW04		

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

Water table ~ 5' bgs

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW05
Sample Location: AS705-UST-SW05
Sampled By: J. Birkett J. Galler
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1055	4-5' bgs	tan	F-M sand tr silt and C. sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0,0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

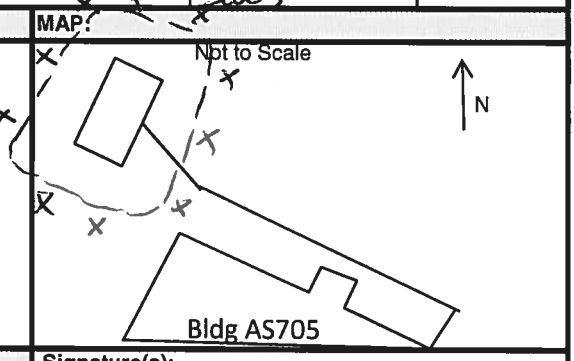
Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	[] [X]
Odors	[] [X]

Water table ~5' bgs

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW06
Sample Location: AS705-UST-SW06
Sampled By: J. Birkett J. Galler
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1059	tan - light brn	4-5' bgs	F-M sand tr. silt, C. sand, and gravel
Method: Disp. Trowel			Moist
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

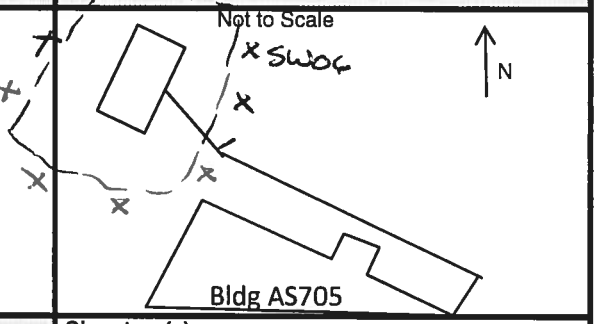
OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	☐ ☒
Odors	☐ ☒

Water table ~ 5' bgs

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	AS705-UST-SW06a 1059

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW07
Sample Location: AS705-UST-SW07
Sampled By: J. Birkett, J. Galler
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105	4-5' bgs	dk brn	organic rich matter sticks, roots w/ some F-M sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

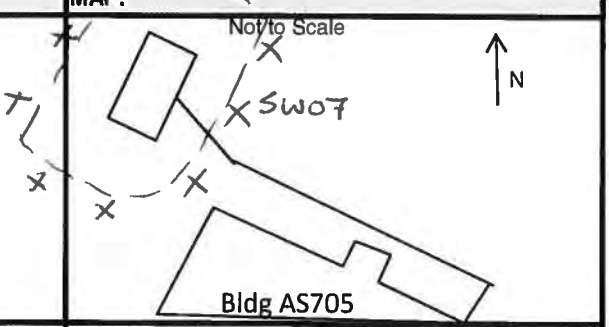
OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	☐ ☒
Odors	☐ ☒

Water table ~5' bgs

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

Sample ID No.: AS705-UST-SW08
Sample Location: AS705-UST-SW08
Sampled By: J. Birkett, J. Galler
C.O.C. No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1120	4-5' bgs	DK Brn to tan	organic rich matter w/ some F. sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

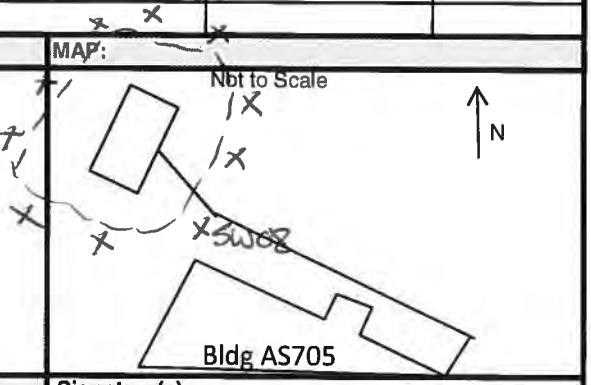
Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

Water table - 5' bgs

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW09
Sample Location: AS705-UST-SW09
Sampled By: J. Birkett, J. Galler
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	4-5' bgs	tan	F-M sand tr. silt moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.6			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

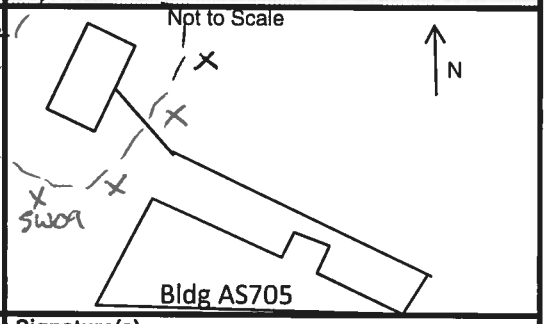
OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	☐ ☒
Odors	☐ ☒

Water table – 5' bgs

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	AS705-UST-SW09a 1115

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

Sample ID No.: AS705-UST-SW10
Sample Location: AS705-UST-SW10
Sampled By: J. Birkett, J. Galler
C.O.C. No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1-14-14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1110	4-5'bgs	Dk Brn	organic rich matter w/ some F-M sand moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TPH GRO	2 MeOH 40 mL vials with 5g soil	yes	
TPH DRO and % moisture	1 4 oz jar	yes	

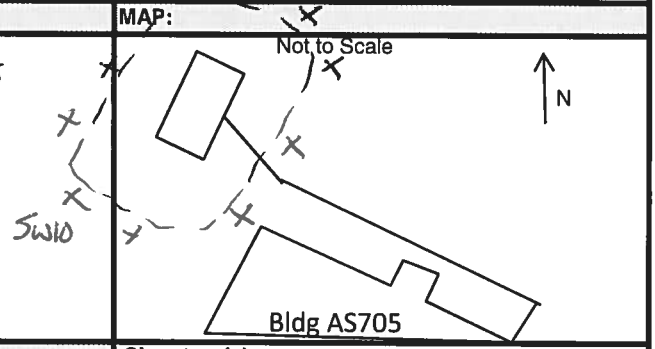
OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	☐ ☒
Odors	☐ ☒

Water table ~5'bgs

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

Sample ID No.: AS705-UST-SW11
Sample Location: AS705-UST-SW11
Sampled By:
C.O.C. No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11/22/14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0845	4-5' bgs	brown	F. sand w tr silt moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date: 11/22/14	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method: G				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

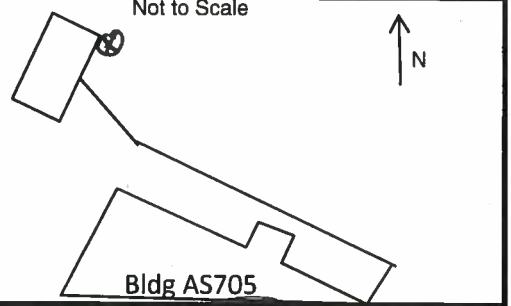
Analysis	Container Requirements	Collected	Other
MADEP VPH	2 MeOH 40 mL vials each with 5g soil	Yes	
VOCs w/ IPE and MTBE (8260B)	2 DI H20 and 1 MeOH 40 mL vials each with 5g soil	Yes	
MADEP EPH	1 8 oz jar	Yes	
SVOCs (8270B)	1 8 oz jar	Yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	AS705-UST-SW11A

Signature(s): for John Galler

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

Sample ID No.: AS705-UST-SW12
Sample Location: AS705-UST-SW12
Sampled By:
C.O.C. No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1/22/14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0830	4-5'	brown	FM sand tr silt moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

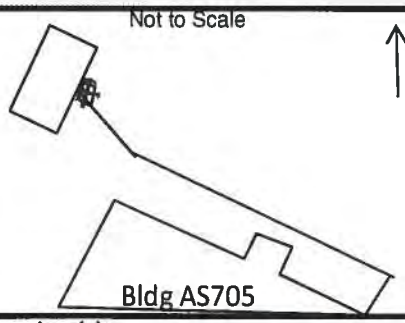
Analysis	Container Requirements	Collected	Other
MADEP VPH	2 MeOH 40 mL vials each with 5g soil	Yes	
VOCs w/ IPE and MTBE (8260B)	2 DI H20 and 1 MeOH 40 mL vials each with 5g soil	yes	
MADEP EPH	1 8 oz jar	yes	
SVOCs (8270B)	1 8 oz jar	yes	

OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	☐ ☒
Odors	☐ ☑

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s): John G. Adl

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

Sample ID No.: AS705-UST-SW13
Sample Location: AS705-UST-SW13
Sampled By:
C.O.C. No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1/22/14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 815	4-5' bgs	tan	F Sand to silt moist
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

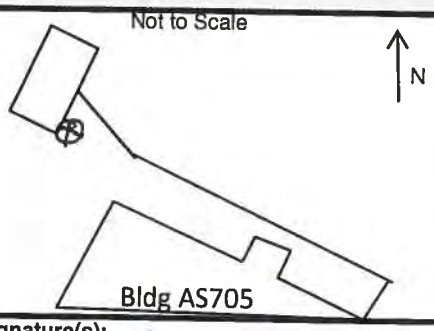
Analysis	Container Requirements	Collected	Other
MADEP VPH	2 MeOH 40 mL vials each with 5g soil	Yes	
VOCs w/ IPE and MTBE (8260B)	2 DI H20 and 1 MeOH 40 mL vials each with 5g soil	Yes	
MADEP EPH	1 8 oz jar	Yes	
SVOCs (8270B)	1 8 oz jar	Yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☑
Odors	☐	☑

MAP:

Not to Scale



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: AS705-UST-SW14
Sample Location: AS705-UST-SW14
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 1/22/14	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0915	4-5' bgs	brown	F/M sand tr silt + organics, asphalt present in layer
Method: Disp. Trowel			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
MADEP VPH	2 MeOH 40 mL vials each with 5g soil	Yes	
VOCs w/ IPE and MTBE (8260B)	2 DI H20 and 1 MeOH 40 mL vials each with 5g soil	Yes	
MADEP EPH	1 8 oz jar	Yes	
SVOCs (8270B)	1 8 oz jar	Yes	

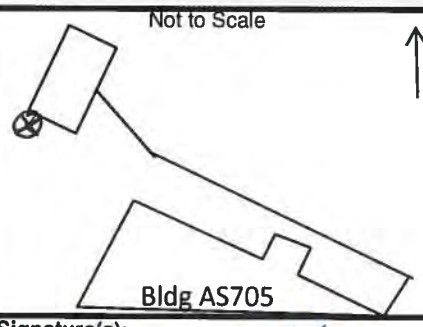
OBSERVATIONS / NOTES:

	Yes / No
Soil Staining	☐ ☒
Odors	☐ ☒

Asphalt present

MAP:

Not to Scale



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Camp Lejeune UST Removal
Project No.: 112IG06199

Sample ID No.: AS705-UST-SP01
Sample Location: AS705-UST-SP01
Sampled By:
C.O.C. No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method: Disp. Trowel			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date: 1/22/14	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0925	0-1	brown	F-M sand w gravel
Method: 5pr grab	0925	0-1	brown	F-C sand w/ tr silt
	0925	0-1	grey	F-M sand w/ gravel
Monitor Readings	0925	0-1	tan	F-M sand w/ tr silt
(Range in ppm):	0925	~~0~~ 0-1	grey	F-M sand w/ tr silt
0.0				

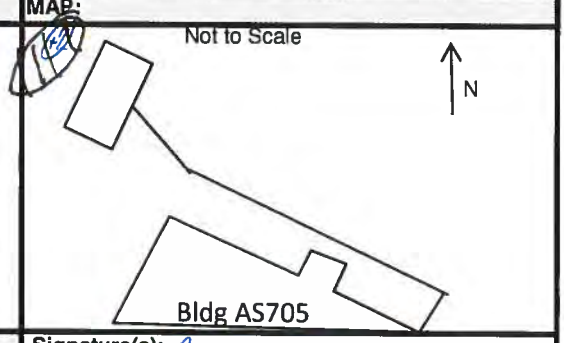
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~MADEP VPH~~	~~2 MeOH 40 mL vials each with 5g soil~~		
~~VOCs w/ IPE and MTBE (8260B)~~	2 DI H20 and 1 MeOH 40 mL vials each with 5g soil		
~~MADEP EPH~~	~~1 8 oz jar~~		
~~SVOCs (8270B)~~	~~1 8 oz jar~~		
TPH-GRO	2 methanol vials	yes	
VOC (8021B)	4 oz jar	yes	
SVOC, Herb, pest, metals + Hg, PCB, DRO, RCRA	3 8oz jars	yes	

OBSERVATIONS / NOTES:

	Yes	No
Soil Staining	☐	☒
Odors	☐	☒

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): John J. Fuller

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APPENDIX F.2

GROUNDWATER SAMPLE LOGSHEETS

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Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MCB Camp Lejeune UST A S705
Project No.: 112IG6199

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: AS705-MW01
Sample Location: AS705-MW01
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-13-14	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0917	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	Clear	7.01	1.43	14.33	2.91	0.00	0.7	-98

PURGE DATA:

Date: 2-13-14	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —		See low flow purge sheet for detail						
Static Water Level (WL): 3.91								
One Casing Volume(gal/L):								
Start Purge (hrs): 0805								
End Purge (hrs): 0917								
Total Purge Time (min): 72								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC ~~(8260B)~~ (602)	HCL	3 40-mL glass vials	Yes
EDB (EPA 504)	Na2S2O3	3 40-mL glass vials	Yes
TRPH MAVPH	HCL	3 40-mL glass vials	Yes
TRPH MAEPH	H2SO4	2 1-L Amber Bottle	Yes
~~Metals (no Hg)~~	~~HNO3~~	~~1 250-mL poly bottle~~	~~NO~~
SVOCs (EPA 625)	none	2 1-L Amber Bottle	yes
IDW IRC	—	2 1-L Amber Bottles	yes
IDW PCBs	—	2 1-L Amber Bottles	yes
IDW Total Metals	HNO_3	1 250-mL poly bottles	yes

OBSERVATIONS / NOTES:

IDW sample w/ sample ID AS705-AQIDW-20140213 0917

Petroleum odor

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Jal Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Camp Lejeune UST A5705
PROJECT NUMBER: 112IG06199

WELL ID.: A5705-MW01
DATE: 2-13-14

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0805	3.91									
0810	3.92	300	8.29	1.93	—	0.00	14.59	-101	1.0	tan color w/petroleum odor
0815	3.92	300	8.35	1.90	33.6	0.00	14.40	-146	0.9	tan tint " "
0820	3.92	300	8.46	1.86	17.2	0.00	14.38	-166	0.9	clear
0825	3.92	300	8.04	1.79	10.4	0.00	14.30	-124	0.9	clear
0830	3.92	300	7.63	1.71	11.7	0.00	14.32	-101	0.9	clear
0835	3.92	300	7.41	1.64	10.3	0.00	14.31	-96	0.8	clear 2 gal
0840	3.92	300	7.30	1.58	8.31	0.00	14.31	-95	0.8	clear
0845	3.92	300	7.21	1.56	6.94	0.00	14.32	-94	0.8	clear
0850	3.92	300	7.15	1.53	5.43	0.00	14.31	-95	0.8	clear 3 gal
0855	3.92	300	7.11	1.50	4.36	0.00	14.09	-94	0.7	clear
0900	3.92	300	7.07	1.48	3.41	0.00	14.22	-95	0.7	clear
0905	3.92	300	7.05	1.46	3.04	0.00	14.20	-96	0.7	clear 4 gal
0910	3.92	300	7.02	1.44	2.96	0.00	14.16	-97	0.7	clear
0915	3.92	300	7.01	1.43	2.91	0.00	14.33	-98	0.7	clear
0917	Collect sample									

SIGNATURE(S):

APPENDIX F.3

SAMPLE POINT GPS DATA

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UST AS705

SAMPLE POINT GPS DATA

Comment	GPS_Date	Easting	Northing
pl01	1/14/2014	277314.1	3845038
pl02	1/14/2014	277314.9	3845037
pl03	1/14/2014	277313.9	3845035
pl04	1/14/2014	277313.1	3845032
sw01	1/14/2014	277309.5	3845040
sw02	1/14/2014	277311	3845042
sw03	1/14/2014	277313.1	3845043
sw04	1/14/2014	277315.3	3845044
sw05	1/14/2014	277317	3845043
sw06	1/14/2014	277318	3845040
sw07	1/14/2014	277316.2	3845038
sw08	1/14/2014	277314.5	3845036
sw09	1/14/2014	277311.3	3845036
sw10	1/14/2014	277309.9	3845038
sw11	1/22/2014	277318.7	3845039
sw12	1/22/2014	277316.8	3845038
sw13	1/22/2014	277315.1	3845035
sw14	1/22/2014	277309.4	3845037

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APPENDIX G

ANALYTICAL RECORDS

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APPENDIX G.1

ROUND 1 SOIL ANALYTICAL REPORT

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Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA 116397 PAGE 1 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 Van Karman, Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabina Sudoko E-mail:
Phone#: 949-809-5022
Sampler(s) Name(s) (Printed): Jacob Birkett John Galler

Project Information

Project Name: Camp Lejeune USTs
Street:
City: Jacksonville State: NC
Project #: 4659 WE03
Fax #:
Client Purchase Order #: 103677320

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	GRO	DRO and % Solids										LAB USE ONLY
1	AS705-UST-PL04	1-14-14	0850	JB	SO	3		1							2	2	1										
2	AS705-UST-PL03	1-14-14	0855	JB	SO	3		1							2	2	1										
3	AS705-UST-PL02	1-14-14	0900	JB	SO	3		1							2	2	1										
4	AS705-UST-SW01	1-14-14	1040	JB JG	SO	3		1							2	2	1										
5	AS705-UST-SW02	1-14-14	1045	JB JG	SO	3		1							2	2	1										
6	AS705-UST-SW03	1-14-14	1050	JB JG	SO	9		3							6	6	3									RUN MSMSD	
7	AS705-UST-SW05	1-14-14	1055	JB JG	SO	3		1							2	2	1										
8	AS705-UST-SW04	1-14-14	1056	JB JG	SO	3		1							2	2	1										
9	AS705-UST-SW06	1-14-14	1059	JB JG	SO	3		1							2	2	1										
10	AS705-UST-SW06a	1-14-14	1059	JB JG	SO	3		1							2	2	1									Duplicate	
11	AS705-UST-SW07	1-14-14	1105	JB JG	SO	3		1							2	2	1										
12	AS705-UST-SW10	1-14-14	1110	JB JG	SO	3		1							2	2	1										

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [x] 3 Day EMERGENCY — Mark Pisarcik
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [x] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FedEx Airbill #8047-2600-5097
NO AS705-UST-PL01 sample due to being in gravel (within excavation)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Jacob Birkett	1-14-14 1600	2 FedEx	3 FX	1-15-14	4 J. Cope (ASG) 09:30
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.6

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA 11639 PAGE 2 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 Von Karman Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabina Sudake E-mail:
Phone#: 949-809-5022
Sampler(s) Name(s) (Printed): Jacob Birkett John Graller

Project Information

Project Name:
Street
City State
Project #
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	GRO	DRO and % Solids
13	A5705-UST-SW09	1-14-14	1115	JB JG	SO	3		1							2	2	1
14	A5705-UST-SW09a	1-14-14	1115	JB JG	SO	3		1							2	2	1
15	A5705-UST-SW08	1-14-14	1120	JB JG	SO	3		1							2	2	1

1-14-14

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [X] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [X] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

FedEx 8047-2600-5097

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 1-14-14 1600	Received By: 2 FedEx	Relinquished by: 3 FX	Date Time: 1-15-14	Received By: 4 J. Coppe (ALS) 09:30
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

Southeast
ACCUTEST LABORATORIES

01/20/14

Technical Report for

Tetra Tech EC, Inc

WE03, Camp Lejuene, NC

4659 WE03

Accutest Job Number: FA11639

Sampling Date: 01/14/14

Report to:

Tetra Tech EC, Inc
17885 Von Karman Ave Suite 500
Irvine, CA 92614
lisa.bienkowski@tetratech.com; sabina.sudoko@tetratech.com

ATTN: Lisa Bienkowski

Total number of pages in report: 57

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

Sections: 1 2 3 4 5 6 7

Table of Contents

Sample Summary

Tetra Tech EC, Inc

Job No: FA11639

WE03, Camp Lejuene, NC
Project No: 4659 WE03

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA11639-1	01/14/14	08:50	JBJG	01/15/14	SO	Soil	AS705-UST-PL04
FA11639-2	01/14/14	08:55	JBJG	01/15/14	SO	Soil	AS705-UST-PL03
FA11639-3	01/14/14	09:00	JBJG	01/15/14	SO	Soil	AS705-UST-PL02
FA11639-4	01/14/14	10:40	JBJG	01/15/14	SO	Soil	AS705-UST-SW01
FA11639-5	01/14/14	10:45	JBJG	01/15/14	SO	Soil	AS705-UST-SW02
FA11639-6	01/14/14	10:50	JBJG	01/15/14	SO	Soil	AS705-UST-SW03
FA11639-6D	01/14/14	10:50	JBJG	01/15/14	SO	Soil Dup/MSD	AS705-UST-SW03
FA11639-6S	01/14/14	10:50	JBJG	01/15/14	SO	Soil Matrix Spike	AS705-UST-SW03
FA11639-7	01/14/14	10:55	JBJG	01/15/14	SO	Soil	AS705-UST-SW05
FA11639-8	01/14/14	10:56	JBJG	01/15/14	SO	Soil	AS705-UST-SW04
FA11639-9	01/14/14	10:59	JBJG	01/15/14	SO	Soil	AS705-UST-SW06
FA11639-10	01/14/14	10:59	JBJG	01/15/14	SO	Soil	AS705-UST-SW06A
FA11639-11	01/14/14	11:05	JBJG	01/15/14	SO	Soil	AS705-UST-SW07

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Tetra Tech EC, Inc

Job No: FA11639

WE03, Camp Lejuene, NC
Project No: 4659 WE03

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA11639-12	01/14/14	11:10	JBJG	01/15/14	SO	Soil	AS705-UST-SW10
FA11639-13	01/14/14	11:15	JBJG	01/15/14	SO	Soil	AS705-UST-SW09
FA11639-14	01/14/14	11:15	JBJG	01/15/14	SO	Soil	AS705-UST-SW09A
FA11639-15	01/14/14	11:20	JBJG	01/15/14	SO	Soil	AS705-UST-SW08

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech EC, Inc **Job No:** FA11639

Site: WE03, Camp Lejuene, NC **Report Date** 1/20/2014 10:23:07 AM

15 Samples were collected on 01/14/2014 and were received at Accutest SE on 01/15/2014 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of FA11639. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method SW846 8015C

Matrix: SO **Batch ID:** GUV3311

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11622-3MS, FA11622-3MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** GUV3312

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11639-3MS, FA11639-3MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** GUV3313

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11639-6MS was used as the QC samples indicated.

GUV3313-BS: No MSD available for this run.

Extractables by GC By Method SW846 8015C

Matrix: SO **Batch ID:** OP50094

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11639-6MS, FA11639-6MSD were used as the QC samples indicated.

FA11639-11 for TPH (C10-C28): Petroleum hydrocarbon pattern extends beyond C28.

FA11639-12 for TPH (C10-C28): Petroleum hydrocarbon pattern extends beyond C28.

FA11639-15 for TPH (C10-C28): Petroleum hydrocarbon pattern extends beyond C28.

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN59727

Sample(s) FA11639-6DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN59729

Sample(s) FA11639-8DUP, FA11639-9DUP were used as the QC samples for Solids, Percent.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

_____ Date: January 20, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA11639
Account: Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC
Collected: 01/14/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA11639-1	**AS705-UST-PL04**					
TPH (C10-C28)		7.54	5.2	4.2	mg/kg	SW846 8015C
FA11639-2	**AS705-UST-PL03**					
TPH (C10-C28)		4.91 J	5.0	4.0	mg/kg	SW846 8015C
FA11639-3	**AS705-UST-PL02**					
TPH (C10-C28)		6.94	4.8	3.8	mg/kg	SW846 8015C
FA11639-4	**AS705-UST-SW01**					
No hits reported in this sample.						
FA11639-5	**AS705-UST-SW02**					
No hits reported in this sample.						
FA11639-6	**AS705-UST-SW03**					
No hits reported in this sample.						
FA11639-7	**AS705-UST-SW05**					
TPH (C10-C28)		5.17	4.7	3.7	mg/kg	SW846 8015C
FA11639-8	**AS705-UST-SW04**					
No hits reported in this sample.						
FA11639-9	**AS705-UST-SW06**					
TPH (C10-C28)		19.6	4.7	3.8	mg/kg	SW846 8015C
FA11639-10	**AS705-UST-SW06A**					
TPH (C10-C28)		19.0	4.7	3.7	mg/kg	SW846 8015C
FA11639-11	**AS705-UST-SW07**					
TPH-GRO (C6-C10)		4.55 J	6.0	3.0	mg/kg	SW846 8015C
TPH (C10-C28) [a]		190	27	22	mg/kg	SW846 8015C

Summary of Hits

Job Number: FA11639
Account: Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC
Collected: 01/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA11639-12	**AS705-UST-SW10**					
TPH (C10-C28) [a]		19.1	5.0	4.0	mg/kg	SW846 8015C
FA11639-13	**AS705-UST-SW09**					
No hits reported in this sample.						
FA11639-14	**AS705-UST-SW09A**					
No hits reported in this sample.						
FA11639-15	**AS705-UST-SW08**					
TPH (C10-C28) [a]		44.5	4.8	3.9	mg/kg	SW846 8015C

(a) Petroleum hydrocarbon pattern extends beyond C28.

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AS705-UST-PL04
Lab Sample ID: FA11639-1
Matrix: SO - Soil
Method: SW846 8015C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 80.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV061983.D	1	01/16/14	MM	n/a	n/a	GUV3311
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.24 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.1 U	6.2	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-149%
98-08-8	aaa-Trifluorotoluene	109%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-PL04
Lab Sample ID: FA11639-1
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 80.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001175.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	7.54	5.2	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-PL03		
Lab Sample ID:	FA11639-2	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	83.0
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV061984.D	1	01/16/14	MM	n/a	n/a	GUV3311
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	2.7 U	5.4	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-149%
98-08-8	aaa-Trifluorotoluene	109%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-PL03
Lab Sample ID: FA11639-2
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 83.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001176.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	4.91	5.0	4.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-PL02		
Lab Sample ID:	FA11639-3	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	87.0
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV061999.D	1	01/16/14	MM	n/a	n/a	GUV3312
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.15 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.2 U	6.3	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-PL02
Lab Sample ID: FA11639-3
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 87.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001177.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	6.94	4.8	3.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW01		
Lab Sample ID:	FA11639-4	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	82.2
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062009.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.41 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.4 U	6.7	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW01
Lab Sample ID: FA11639-4
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 82.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001178.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.7 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	4.1 U	5.1	4.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW02		
Lab Sample ID:	FA11639-5	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	83.8
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062010.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.30 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	2.9 U	5.7	2.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW02
Lab Sample ID: FA11639-5
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 83.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001179.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	4.0 U	5.0	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW03		
Lab Sample ID:	FA11639-6	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	87.2
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062011.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.04 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.2 U	6.4	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW03
Lab Sample ID: FA11639-6
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 87.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001182.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	3.8 U	4.8	3.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	73%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW05		
Lab Sample ID:	FA11639-7	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	88.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062014.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.20 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.0 U	6.0	3.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		56-149%
98-08-8	aaa-Trifluorotoluene	109%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW05
Lab Sample ID: FA11639-7
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 88.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001185.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	5.17	4.7	3.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW04		
Lab Sample ID:	FA11639-8	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	88.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062015.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.08 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.1 U	6.2	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW04
Lab Sample ID: FA11639-8
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 88.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001186.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	3.8 U	4.8	3.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW06		
Lab Sample ID:	FA11639-9	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	89.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062019.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.47 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	2.9 U	5.7	2.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW06
Lab Sample ID: FA11639-9
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 89.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001187.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	19.6	4.7	3.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW06A		
Lab Sample ID:	FA11639-10	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	88.0
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062020.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.2 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	1.7 U	3.5	1.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW06A
Lab Sample ID: FA11639-10
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 88.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001188.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	19.0	4.7	3.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW07
Lab Sample ID: FA11639-11
Matrix: SO - Soil
Method: SW846 8015C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 75.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062021.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.52 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	4.55	6.0	3.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		56-149%
98-08-8	aaa-Trifluorotoluene	109%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW07
Lab Sample ID: FA11639-11
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 75.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001189.D	5	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28) [a]	190	27	22	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		56-122%

(a) Petroleum hydrocarbon pattern extends beyond C28.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW10		
Lab Sample ID:	FA11639-12	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	83.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062022.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.35 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.3 U	6.5	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW10		
Lab Sample ID:	FA11639-12	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C SW846 3550C	**Percent Solids:**	83.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001190.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28) [a]	19.1	5.0	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		56-122%

(a) Petroleum hydrocarbon pattern extends beyond C28.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW09		
Lab Sample ID:	FA11639-13	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	87.7
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062023.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.19 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.1 U	6.2	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW09
Lab Sample ID: FA11639-13
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 87.7

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001194.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	3.9 U	4.8	3.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW09A		
Lab Sample ID:	FA11639-14	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	86.5
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062024.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.30 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.1 U	6.2	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		56-149%
98-08-8	aaa-Trifluorotoluene	108%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW09A
Lab Sample ID: FA11639-14
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 86.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001195.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	3.9 U	4.8	3.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW08		
Lab Sample ID:	FA11639-15	**Date Sampled:**	01/14/14
Matrix:	SO - Soil	**Date Received:**	01/15/14
Method:	SW846 8015C	**Percent Solids:**	85.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062025.D	1	01/16/14	MM	n/a	n/a	GUV3313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.26 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	3.2 U	6.4	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		56-149%
98-08-8	aaa-Trifluorotoluene	110%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW08
Lab Sample ID: FA11639-15
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/14/14
Date Received: 01/15/14
Percent Solids: 85.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001196.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28) [a]	44.5	4.8	3.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		56-122%

(a) Petroleum hydrocarbon pattern extends beyond C28.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA 11639 PAGE 1 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 VanKarman, Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabina Sudoko E-mail:
Phone#: 949-809-5022
Sampler(s) Name(s) (Printed): Jacob Birkett John Galler

Project Information

Project Name: Camp Lejeune UST5
Street:
City: Jacksonville State: NC
Project #: 4659 WE03
Fax #:
Client Purchase Order #: 103677320

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	GRO	DRO and % Solids																LAB USE ONLY
1	AS705-UST-PL04	1-14-14	0850	JB	SO	3		1							2	2	1																
2	AS705-UST-PL03	1-14-14	0855	JB	SO	3		1							2	2	1																
3	AS705-UST-PL02	1-14-14	0900	JB	SO	3		1							2	2	1																
4	AS705-UST-SW01	1-14-14	1040	JB JG	SO	3		1							2	2	1																
5	AS705-UST-SW02	1-14-14	1045	JB JG	SO	3		1							2	2	1																
6	AS705-UST-SW03	1-14-14	1050	JB JG	SO	9		3							6	6	3		Run MS/MSD														
7	AS705-UST-SW05	1-14-14	1055	JB JG	SO	3		1							2	2	1																
8	AS705-UST-SW04	1-14-14	1056	JB JG	SO	3		1							2	2	1																
9	AS705-UST-SW06	1-14-14	1059	JB JG	SO	3		1							2	2	1																
10	AS705-UST-SW06a	1-14-14	1059	JB JG	SO	3		1							2	2	1		Duplicate														
11	AS705-UST-SW07	1-14-14	1105	JB JG	SO	3		1							2	2	1																
12	AS705-UST-SW10	1-14-14	1110	JB JG	SO	3		1							2	2	1																

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [X] 3 Day EMERGENCY — Mark Pisarcik
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [X] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

FedEx Airbill #8047-2600-5097
NO AS705-UST-PL01 sample due to being in gravel (within excavation)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Jacob Birkett	1-14-14 1600	2 FedEx	3 FX	1-15-14	4 J. Cooper (ASG) 09:30
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.6

5.1 5

FA11639: Chain of Custody
Page 1 of 4

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA 11639 PAGE 2 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 Von Karman Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabina Sedeke E-mail:
Phone#: 949-809-5022
Sampler(s) Name(s) (Printed): Jacob Burkett John Graller

Project Information

Project Name:
Street
City State
Project #
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	GRO	DRO and % Silds
13	A5705-UST-SW09	1-14-14	1115	JB JG	SO	3		1							2	2	1
14	A5705-UST-SW09a	1-14-14	1115	JB JG	SO	3		1							2	2	1
15	A5705-UST-SW08	1-14-14	1120	JB JG	SO	3		1							2	2	1

1-14-14

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [x] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [x] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FedEx 8047-2600-5097

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	1-14-14 1600	2 FedEx	3 FX	1-15-14	4 J. Coppe (AIS&E) 09:30
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius:

FA11639: Chain of Custody
Page 2 of 4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 11639 CLIENT: TETRA TECH PROJECT: CAMP LEJEUNE

DATE/TIME RECEIVED: 1-15-14 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8047 2600 5097

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM _____ 5-GRAM _____

NUMBER OF 5035 FIELD KITS ? 17

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 4.0
- [ ] CORRECTED TEMPS: 3.6

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE JC 1-15-14 REVIEWER SIGNATURE/DATE 1/15/14

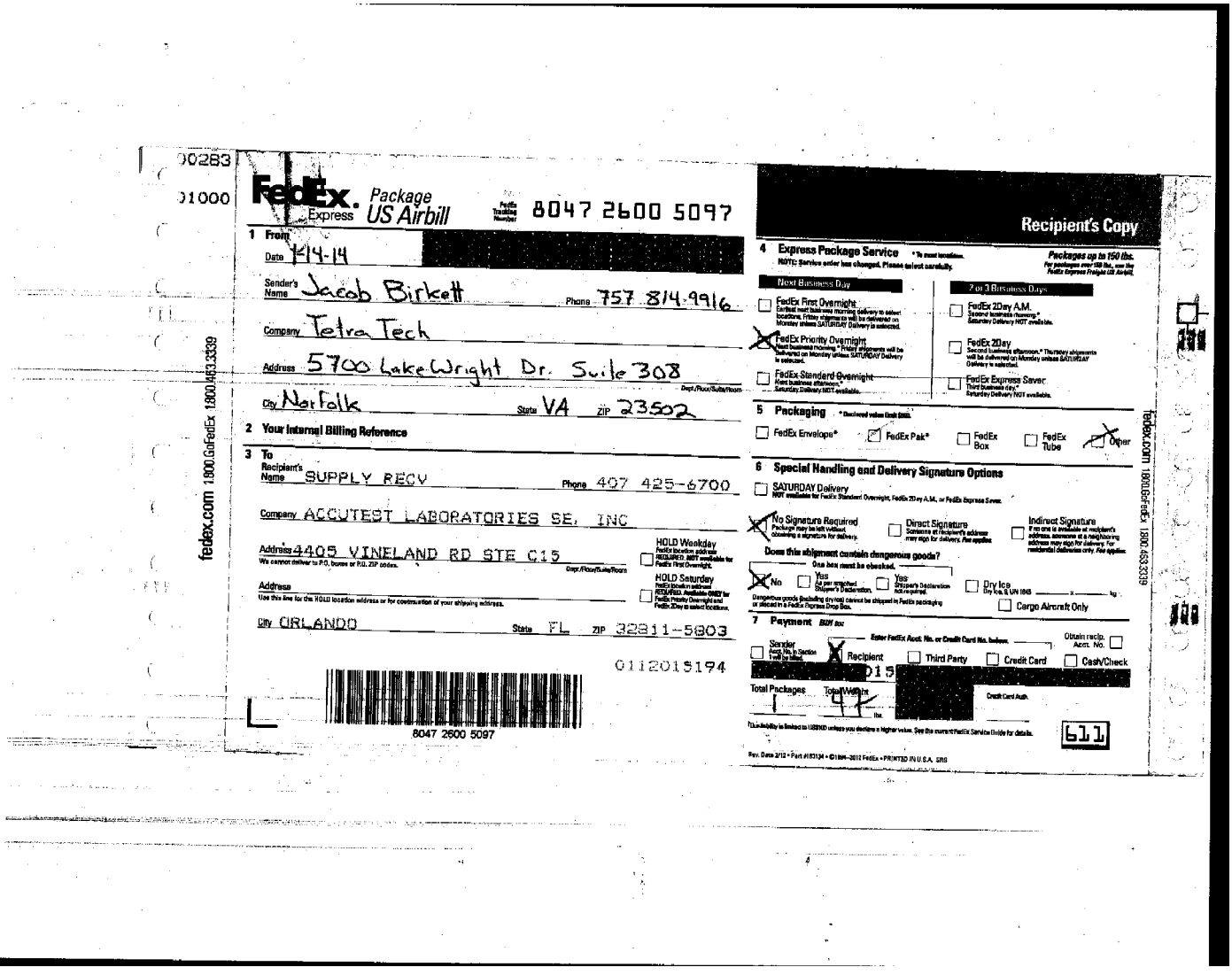
NF 12/10

receipt confirmation 122910.xls

5.1 5

FA11639: Chain of Custody

Page 3 of 4



00283
01000

FedEx Express Package US Airbill

8047 2600 5097

Recipient's Copy

1 From
Date 4-14-14
Sender's Name Jacob Birkett Phone 757 814-9916
Company Tetra Tech
Address 5700 Lake Wright Dr. Suite 308
City Norfolk State VA ZIP 23502

2 Your Internal Billing Reference

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15
City ORLANDO State FL ZIP 32811-5803

0112015194

8047 2600 5097

4 Express Package Service
Next Business Day
FedEx First Overnight
FedEx Priority Overnight
FedEx Standard Overnight
2 or 3 Business Days
FedEx 2Day A.M.
FedEx 2Day
FedEx Express Saver

5 Packaging
FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options
SATURDAY Delivery
No Signature Required
Direct Signature
Indirect Signature
Does the shipment contain dangerous goods?
No Yes Dry Ice Cargo Aircraft Only

7 Payment
Sender Recipient Third Party Credit Card Cash/Check
Total Packages 1 Total Weight 47 lbs.

611

fedex.com 1.800.GoFedEx 1.800.463.3339

FA11639: Chain of Custody
Page 4 of 4

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3311-MB	UV061956.D	1	01/15/14	MM	n/a	n/a	GUV3311

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-1, FA11639-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	56-149%
98-08-8	aaa-Trifluorotoluene	106%	66-132%

Method Blank Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3312-MB	UV061991.D	1	01/16/14	MM	n/a	n/a	GUV3312

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	56-149%
98-08-8	aaa-Trifluorotoluene	109%	66-132%

Method Blank Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3313-MB	UV062008.D	1	01/16/14	MM	n/a	n/a	GUV3313

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-4, FA11639-5, FA11639-6, FA11639-7, FA11639-8, FA11639-9, FA11639-10, FA11639-11, FA11639-12, FA11639-13, FA11639-14, FA11639-15

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	97%	56-149%
98-08-8	aaa-Trifluorotoluene	109%	66-132%

Blank Spike Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3311-BS	UV061955.D	1	01/15/14	MM	n/a	n/a	GUV3311

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-1, FA11639-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.4	97	74-128

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	94%	56-149%
98-08-8	aaa-Trifluorotoluene	107%	66-132%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3312-BS	UV061990.D	1	01/16/14	MM	n/a	n/a	GUV3312

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	18.9	95	74-128

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	96%	56-149%
98-08-8	aaa-Trifluorotoluene	105%	66-132%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3313-BS [a]	UV062007.D	1	01/16/14	MM	n/a	n/a	GUV3313

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-4, FA11639-5, FA11639-6, FA11639-7, FA11639-8, FA11639-9, FA11639-10, FA11639-11, FA11639-12, FA11639-13, FA11639-14, FA11639-15

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.8	99	74-128

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	96%	56-149%
98-08-8	aaa-Trifluorotoluene	107%	66-132%

(a) No MSD available for this run.

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11639-6MS	UV062013.D	1	01/16/14	MM	n/a	n/a	GUV3313
FA11639-6	UV062011.D	1	01/16/14	MM	n/a	n/a	GUV3313

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-4, FA11639-5, FA11639-6, FA11639-7, FA11639-8, FA11639-9, FA11639-10, FA11639-11, FA11639-12, FA11639-13, FA11639-14, FA11639-15

CAS No.	Compound	FA11639-6 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Limits
	TPH-GRO (C6-C10)	6.4	U	25.7	25.6	100	74-128

CAS No.	Surrogate Recoveries	MS	FA11639-6	Limits
460-00-4	4-Bromofluorobenzene	96%	98%	56-149%
98-08-8	aaa-Trifluorotoluene	105%	108%	66-132%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11622-3MS	UV061961.D	1	01/15/14	MM	n/a	n/a	GUV3311
FA11622-3MSD	UV061962.D	1	01/15/14	MM	n/a	n/a	GUV3311
FA11622-3	UV061960.D	1	01/15/14	MM	n/a	n/a	GUV3311

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-1, FA11639-2

CAS No.	Compound	FA11622-3 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	8.26		28	34.0	92	34.2	93	1	74-128/17

CAS No.	Surrogate Recoveries	MS	MSD	FA11622-3	Limits
460-00-4	4-Bromofluorobenzene	94%	94%	93%	56-149%
98-08-8	aaa-Trifluorotoluene	107%	106%	106%	66-132%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11639-3MS	UV062002.D	1	01/16/14	MM	n/a	n/a	GUV3312
FA11639-3MSD	UV062003.D	1	01/16/14	MM	n/a	n/a	GUV3312
FA11639-3	UV061999.D	1	01/16/14	MM	n/a	n/a	GUV3312

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-3

CAS No.	Compound	FA11639-3 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	6.3	U	25.3	25.7	102	24.4	96	5	74-128/17

CAS No.	Surrogate Recoveries	MS	MSD	FA11639-3	Limits
460-00-4	4-Bromofluorobenzene	95%	96%	97%	56-149%
98-08-8	aaa-Trifluorotoluene	106%	105%	108%	66-132%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50094-MB	JJ001174.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-1, FA11639-2, FA11639-3, FA11639-4, FA11639-5, FA11639-6, FA11639-7, FA11639-8, FA11639-9, FA11639-10, FA11639-11, FA11639-12, FA11639-13, FA11639-14, FA11639-15

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	4.2	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	77%	56-122%

Blank Spike Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50094-BS	JJ001173.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-1, FA11639-2, FA11639-3, FA11639-4, FA11639-5, FA11639-6, FA11639-7, FA11639-8, FA11639-9, FA11639-10, FA11639-11, FA11639-12, FA11639-13, FA11639-14, FA11639-15

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	33.3	30.3	91	62-116

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	81%	56-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11639
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50094-MS	JJ001183.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
OP50094-MSD	JJ001184.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46
FA11639-6	JJ001182.D	1	01/16/14	SJL	01/15/14	OP50094	GJJ46

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11639-1, FA11639-2, FA11639-3, FA11639-4, FA11639-5, FA11639-6, FA11639-7, FA11639-8, FA11639-9, FA11639-10, FA11639-11, FA11639-12, FA11639-13, FA11639-14, FA11639-15

CAS No.	Compound	FA11639-6 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	4.8	U	38.5	31.6	82	33.7	89	6	62-116/35

CAS No.	Surrogate Recoveries	MS	MSD	FA11639-6	Limits
84-15-1	o-Terphenyl	78%	80%	73%	56-122%

* = Outside of Control Limits.

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APPENDIX G.2

ROUND 2 SOIL ANALYTICAL REPORT

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Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA11903 PAGE____ OF____

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 Von Karman Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sapana Sudaka E-mail:
Phone#: 949 859 5022
Sampler(s) Name(s) (Printed): John Geller

Project Information

Project Name: UST Demo Camp Lejeune
Street:
City: Jacksonville State: NC
Project #: 4659WE03
Fax #:
Client Purchase Order #: 103677720

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By:	Matrix	Total # of Bottles	Container Information: Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	8260B w/ EE + MTBE	8270 B	MADEP VPH	MADEP EPH	8260B	TPH-GRO	SVOC	Herbicides + Pesticides	Metals + Hg	PCBs	TPH-DRO + RCRA	Matrix Codes / Lab Use Only
1	AS705-UST-SW11	1/22	0845	JG	SO	7		2						2	3	X	X	X	X								
2	AS705-UST-SW12	"	0830	"	"	7		2						2	3	X	X	X	X								
3	AS705-UST-SW13	"	0815	"	"	7		2						2	3	X	X	X	X								
4	AS705-UST-SW14	"	0915	"	"	21		6						6	9	X	X	X	X								MS/MSD
5	AS705-UST-SW11A	"	0855	"	"	7		2						2	3	X	X	X	X								
6	AS705-UST-SP01	1/22	0925	JG	SO	6		4							2					X	X	X	X	X	X	X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [x] 3 Day EMERGENCY — 3 DAY TAT
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

FedEx # 8047 2600 5010

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 John J. Geller	1/22 1200	2 FX	3 FX 01-23-14	930	4
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 2-4

Southeast
ACCUTEST
LABORATORIES

01/31/14

Technical Report for

Tetra Tech EC, Inc

WE03, Camp Lejuene, NC

4659WE03

Accutest Job Number: FA11903

Sampling Date: 01/22/14

Report to:

Tetra Tech EC, Inc
17885 Von Karman Ave Suite 500
Irvine, CA 92614
lisa.bienkowski@tetratech.com; sabina.sudoko@tetratech.com

ATTN: Lisa Bienkowski

Total number of pages in report: **125**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

Sections: 1 2 3 4 5 6 7 8 9 10 11

Table of Contents

Sections:

1 2 3 4 5 6 7 8 9 10 11

Table of Contents

Accutest Laboratories

Sample Summary

Tetra Tech EC, Inc

Job No: FA11903

WE03, Camp Lejuene, NC
Project No: 4659WE03

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA11903-1	01/22/14	08:45	JG	01/23/14	SO	Soil	AS705-UST-SW11
FA11903-2	01/22/14	08:30	JG	01/23/14	SO	Soil	AS705-UST-SW12
FA11903-3	01/22/14	08:15	JG	01/23/14	SO	Soil	AS705-UST-SW13
FA11903-4	01/22/14	09:15	JG	01/23/14	SO	Soil	AS705-UST-SW14
FA11903-4D	01/22/14	09:15	JG	01/23/14	SO	Soil Dup/MSD	AS705-UST-SW14
FA11903-4S	01/22/14	09:15	JG	01/23/14	SO	Soil Matrix Spike	AS705-UST-SW14
FA11903-5	01/22/14	08:55	JG	01/23/14	SO	Soil	AS705-UST-SW11A
FA11903-6	01/22/14	09:25	JG	01/23/14	SO	Soil	AS705-UST-SP01
FA11903-6L	01/22/14	09:25	JG	01/23/14	SO	Soil	AS705-UST-SP01

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech EC, Inc **Job No:** FA11903

Site: WE03, Camp Lejuene, NC **Report Date** 1/31/2014 12:54:46 PM

6 Samples were collected on 01/22/2014 and were received at Accutest SE on 01/23/2014 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of FA11903. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: LEACHATE **Batch ID:** OP50243

All samples were analyzed within the recommended method holding time.

Sample(s) FA11858-1MS, FA11858-1MSD, FA11815-1LDUP were used as the QC samples indicated.

Sample(s) FA11903-6L has compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Matrix: SO **Batch ID:** VF2056

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11811-1MS, FA11811-1MSD were used as the QC samples indicated.

Sample(s) FA11811-1MS, FA11811-1MSD have surrogates outside control limits. Probable cause is due matrix interference.

Matrix: SO **Batch ID:** VH3177

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-4MS, FA11903-4MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 2,2-Dichloropropane, Acetone, cis-1,3-Dichloropropene, Ethyl tert-Butyl Ether, m-Dichlorobenzene, Methyl Tert Butyl Ether, n-Butylbenzene, Naphthalene, o-Dichlorobenzene, p-Dichlorobenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Vinyl Acetate are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 2,2-Dichloropropane, Acetone, Bromoform, cis-1,3-Dichloropropene, Ethyl alcohol, Ethyl tert-Butyl Ether, Methyl Tert Butyl Ether, Naphthalene, Vinyl Acetate are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for Ethyl alcohol, Vinyl Acetate are outside control limits for sample FA11903-4MSD. Probable cause is due to sample non-homogeneity.

FA11903-2: Sample was prepared from a bulk container.

FA11903-3: Sample was prepared from a bulk container.

FA11903-4: Sample was prepared from a bulk container.

FA11903-5: Sample was prepared from a bulk container.

Extractables by GCMS By Method SW846 8270D

Matrix: LEACHATE **Batch ID:** OP50270

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-6LMS, FA11903-6LMSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** OP50214

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-4MS, FA11903-4MSD were used as the QC samples indicated.

Sample(s) OP50214-MB has surrogates outside control limits.

OP50214-MB for Terphenyl-d14: Outside control limits.

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix: SO **Batch ID:** GUU313

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-4DUP was used as the QC samples indicated.

Sample(s) FA11903-1 has surrogates outside control limits. Probable cause is due to matrix interference.

FA11903-1 for BFB: Outside control limits due to moisture content.

Volatiles by GC By Method SW846 8015C

Matrix: SO **Batch ID:** GUV3319

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-6MS, FA11903-6MSD were used as the QC samples indicated.

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: SO **Batch ID:** OP50239

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-4DUP was used as the QC samples indicated.

Extractables by GC By Method SW846 8015C

Matrix: SO **Batch ID:** OP50225

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11877-8MS, FA11877-8MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8081B

Matrix: LEACHATE **Batch ID:** OP50271

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-6LMS, FA11903-6LMSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082A

Matrix: SO **Batch ID:** OP50229

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-6MS, FA11903-6MSD were used as the QC samples indicated.

RPD(s) for MSD for Aroclor 1016 are outside control limits for sample OP50229-MSD. Probable cause is due to sample non-homogeneity.

Extractables by GC By Method SW846 8151A

Matrix: LEACHATE **Batch ID:** OP50262

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11820-2LLS, FA11820-7LDUP, FA11903-6LMS, FA11903-6LMSD were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: LEACHATE **Batch ID:** MP26742

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA11903-6LDUP, FA11987-1LMS, FA11987-1LMSD, FA11987-1LSDL were used as the QC samples for metals.

RPD(s) for Duplicate for Barium, Selenium are outside control limits for sample MP26742-D2. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Arsenic, Cadmium, Selenium are outside control limits for sample MP26742-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26742-MB2 for Lead: Possible positive bias, but all sample results < DL.

Metals By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP26735

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11903-6LDUP, FA11987-1LMS, FA11987-1LMSD, FA11987-1LSDL were used as the QC samples for metals.

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN59878

Sample(s) FA11840-1DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN59905

Sample(s) FA11903-4DUP, FA11903-5DUP were used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 1010

Matrix: SO **Batch ID:** GN59910

Sample(s) FA11987-1DUP was used as the QC samples for Ignitability (Flashpoint).

FA11903-6 for Ignitability (Flashpoint): Not ignitable.

Wet Chemistry By Method SW846 CHAP7

Matrix: SO **Batch ID:** GN59921

Sample(s) FA11636-1DUP was used as the QC samples for Corrosivity as pH.

Matrix: SO **Batch ID:** GP23352

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11820-7DUP was used as the QC samples for Sulfide Reactivity.

Matrix: SO **Batch ID:** GP23353

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA11820-7DUP was used as the QC samples for Cyanide Reactivity.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

_____ Date: January 31, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA11903
Account: Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC
Collected: 01/22/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA11903-1	**AS705-UST-SW11**					
Acetone		16.7 J	25	13	ug/kg	SW846 8260B
sec-Butylbenzene		1.1 J	2.5	1.0	ug/kg	SW846 8260B
FA11903-2	**AS705-UST-SW12**					
Acetone [a]		37.4 J	74	37	ug/kg	SW846 8260B
FA11903-3	**AS705-UST-SW13**					
Benzo(a)pyrene		40.8 J	190	37	ug/kg	SW846 8270D
Pyrene		69.4 J	190	37	ug/kg	SW846 8270D
FA11903-4	**AS705-UST-SW14**					
Acetone [a]		580	78	39	ug/kg	SW846 8260B
FA11903-5	**AS705-UST-SW11A**					
No hits reported in this sample.						
FA11903-6	**AS705-UST-SP01**					
TPH (C10-C28)		42.7	4.7	3.8	mg/kg	SW846 8015C
Corrosivity as pH		7.9		[b]	su	SW846 CHAP7
Ignitability (Flashpoint) [c]		> 200		[b]	Deg. F	SW846 1010
FA11903-6L	**AS705-UST-SP01**					
Trichloroethylene		0.0090 JB	0.010	0.0050	mg/l	SW846 8260B
Barium		0.24 J	2.0	0.050	mg/l	SW846 6010C

(a) Sample was prepared from a bulk container.
(b) Value reported is laboratory DL (MDL).
(c) Not ignitable.

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AS705-UST-SW11
Lab Sample ID: FA11903-1
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H0084021.D	1	01/28/14	EP	n/a	n/a	VH3177
Run #2	F0063326.D	1	01/23/14	AD	n/a	n/a	VF2056

	Initial Weight
Run #1	10.4 g
Run #2	9.60 g

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	16.7	25	13	ug/kg	J
71-43-2	Benzene	1.0 U	2.5	1.0	ug/kg	
108-86-1	Bromobenzene	1.0 U	2.5	1.0	ug/kg	
74-97-5	Bromochloromethane	1.3 U	2.5	1.3	ug/kg	
75-27-4	Bromodichloromethane	1.0 U	2.5	1.0	ug/kg	
75-25-2	Bromoform	1.0 U	2.5	1.0	ug/kg	
104-51-8	n-Butylbenzene	1.0 U	2.5	1.0	ug/kg	
135-98-8	sec-Butylbenzene	1.1	2.5	1.0	ug/kg	J
98-06-6	tert-Butylbenzene	1.0 U	2.5	1.0	ug/kg	
108-90-7	Chlorobenzene	1.0 U	2.5	1.0	ug/kg	
75-00-3	Chloroethane	2.0 U	2.5	2.0	ug/kg	
67-66-3	Chloroform	1.0 U	2.5	1.0	ug/kg	
95-49-8	o-Chlorotoluene	1.0 U	2.5	1.0	ug/kg	
106-43-4	p-Chlorotoluene	1.0 U	2.5	1.0	ug/kg	
56-23-5	Carbon tetrachloride	1.0 U	2.5	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	1.0 U	2.5	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	1.0 U	2.5	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	1.0 U	2.5	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	1.3 U	2.5	1.3	ug/kg	
107-06-2	1,2-Dichloroethane	1.0 U	2.5	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	1.0 U	2.5	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	1.0 U	2.5	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	1.0 U	2.5	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	1.0 U	2.5	1.0	ug/kg	
124-48-1	Dibromochloromethane	1.0 U	2.5	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	1.0 U	2.5	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1.0 U	2.5	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	2.5	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	1.0 U	2.5	1.0	ug/kg	
95-50-1	o-Dichlorobenzene	1.0 U	2.5	1.0	ug/kg	
106-46-7	p-Dichlorobenzene	1.0 U	2.5	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	1.0 U	2.5	1.0	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11
Lab Sample ID: FA11903-1
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.6

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
10061-02-6	trans-1,3-Dichloropropene	1.0 U	2.5	1.0	ug/kg	
64-17-5	Ethyl alcohol	110 U [a]	220	110	ug/kg	
100-41-4	Ethylbenzene	1.0 U	2.5	1.0	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	1.0 U	2.5	1.0	ug/kg	
591-78-6	2-Hexanone	5.1 U	13	5.1	ug/kg	
98-82-8	Isopropylbenzene	1.0 U	2.5	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	1.0 U	2.5	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	5.1 U	13	5.1	ug/kg	
74-83-9	Methyl bromide	2.0 U	2.5	2.0	ug/kg	
74-87-3	Methyl chloride	2.0 U	2.5	2.0	ug/kg	
75-09-2	Methylene chloride	2.5 U	5.1	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	5.1 U	13	5.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.0 U	2.5	1.0	ug/kg	
91-20-3	Naphthalene	2.0 U	2.5	2.0	ug/kg	
103-65-1	n-Propylbenzene	1.0 U	2.5	1.0	ug/kg	
100-42-5	Styrene	1.0 U	2.5	1.0	ug/kg	
75-85-4	Tert-Amyl Alcohol	14 U [a]	28	14	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	1.0 U	2.5	1.0	ug/kg	
75-65-0	Tert-Butyl Alcohol	14 U [a]	28	14	ug/kg	
762-75-4	tert-Butyl Formate	13 U	25	13	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U	2.5	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	1.0 U	2.5	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	2.5	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	1.3 U	2.5	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.5	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	1.3 U	2.5	1.3	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.5	1.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.0 U	2.5	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.0 U	2.5	1.0	ug/kg	
127-18-4	Tetrachloroethylene	1.0 U	2.5	1.0	ug/kg	
108-88-3	Toluene	1.0 U	2.5	1.0	ug/kg	
79-01-6	Trichloroethylene	1.0 U	2.5	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	2.0 U	2.5	2.0	ug/kg	
75-01-4	Vinyl chloride	1.0 U	2.5	1.0	ug/kg	
108-05-4	Vinyl Acetate	10 U	13	10	ug/kg	
1330-20-7	Xylene (total)	3.0 U	7.6	3.0	ug/kg	
	m,p-Xylene	2.0 U	5.1	2.0	ug/kg	
95-47-6	o-Xylene	1.0 U	2.5	1.0	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW11		
Lab Sample ID:	FA11903-1	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8260B	**Percent Solids:**	94.6
Project:	WE03, Camp Lejuene, NC		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	99%	75-124%
2037-26-5	Toluene-D8	80%	93%	75-126%
460-00-4	4-Bromofluorobenzene	83%	111%	71-133%
17060-07-0	1,2-Dichloroethane-D4	95%	97%	72-135%

(a) Result is from Run# 2

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11
Lab Sample ID: FA11903-1
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U043194.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
65-85-0	Benzoic Acid	350 U	880	350	ug/kg	
95-57-8	2-Chlorophenol	35 U	180	35	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	35 U	180	35	ug/kg	
120-83-2	2,4-Dichlorophenol	35 U	180	35	ug/kg	
105-67-9	2,4-Dimethylphenol	70 U	180	70	ug/kg	
51-28-5	2,4-Dinitrophenol	700 U	880	700	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	140 U	350	140	ug/kg	
95-48-7	2-Methylphenol	35 U	180	35	ug/kg	
	3&4-Methylphenol	70 U	180	70	ug/kg	
88-75-5	2-Nitrophenol	35 U	180	35	ug/kg	
100-02-7	4-Nitrophenol	350 U	880	350	ug/kg	
87-86-5	Pentachlorophenol	350 U	880	350	ug/kg	
108-95-2	Phenol	35 U	180	35	ug/kg	
88-06-2	2,4,6-Trichlorophenol	35 U	180	35	ug/kg	
83-32-9	Acenaphthene	35 U	180	35	ug/kg	
208-96-8	Acenaphthylene	35 U	180	35	ug/kg	
120-12-7	Anthracene	35 U	180	35	ug/kg	
56-55-3	Benzo(a)anthracene	35 U	180	35	ug/kg	
50-32-8	Benzo(a)pyrene	35 U	180	35	ug/kg	
205-99-2	Benzo(b)fluoranthene	35 U	180	35	ug/kg	
191-24-2	Benzo(g,h,i)perylene	35 U	180	35	ug/kg	
207-08-9	Benzo(k)fluoranthene	35 U	180	35	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	35 U	180	35	ug/kg	
85-68-7	Butyl benzyl phthalate	70 U	180	70	ug/kg	
100-51-6	Benzyl Alcohol	70 U	180	70	ug/kg	
91-58-7	2-Chloronaphthalene	35 U	180	35	ug/kg	
106-47-8	4-Chloroaniline	35 U	180	35	ug/kg	
218-01-9	Chrysene	35 U	180	35	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	35 U	180	35	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	35 U	180	35	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	35 U	180	35	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	35 U	180	35	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11
Lab Sample ID: FA11903-1
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.6

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
95-50-1	1,2-Dichlorobenzene	70 U	180	70	ug/kg	
122-66-7	1,2-Diphenylhydrazine	35 U	180	35	ug/kg	
541-73-1	1,3-Dichlorobenzene	70 U	180	70	ug/kg	
106-46-7	1,4-Dichlorobenzene	70 U	180	70	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	70 U	180	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	35 U	180	35	ug/kg	
132-64-9	Dibenzofuran	35 U	180	35	ug/kg	
84-74-2	Di-n-butyl phthalate	140 U	350	140	ug/kg	
117-84-0	Di-n-octyl phthalate	70 U	180	70	ug/kg	
84-66-2	Diethyl phthalate	140 U	350	140	ug/kg	
131-11-3	Dimethyl phthalate	70 U	180	70	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	140 U	350	140	ug/kg	
206-44-0	Fluoranthene	35 U	180	35	ug/kg	
86-73-7	Fluorene	35 U	180	35	ug/kg	
118-74-1	Hexachlorobenzene	35 U	180	35	ug/kg	
87-68-3	Hexachlorobutadiene	70 U	180	70	ug/kg	
77-47-4	Hexachlorocyclopentadiene	70 U	180	70	ug/kg	
67-72-1	Hexachloroethane	70 U	180	70	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	35 U	180	35	ug/kg	
78-59-1	Isophorone	35 U	180	35	ug/kg	
90-12-0	1-Methylnaphthalene	35 U	180	35	ug/kg	
91-57-6	2-Methylnaphthalene	35 U	180	35	ug/kg	
91-20-3	Naphthalene	35 U	180	35	ug/kg	
98-95-3	Nitrobenzene	35 U	180	35	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	35 U	180	35	ug/kg	
86-30-6	N-Nitrosodiphenylamine	70 U	180	70	ug/kg	
85-01-8	Phenanthrene	35 U	180	35	ug/kg	
129-00-0	Pyrene	35 U	180	35	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	35 U	180	35	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	91%		40-102%
4165-62-2	Phenol-d5	91%		41-100%
118-79-6	2,4,6-Tribromophenol	87%		42-108%
4165-60-0	Nitrobenzene-d5	81%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	114%		45-119%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW11		
Lab Sample ID:	FA11903-1	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	94.6
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UU006471.D	1	01/30/14	AH	n/a	n/a	GUU313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.4 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C5- C8 Aliphatics (Unadj.)	1000 U	2900	1000 [a]	ug/kg	
	C9- C12 Aliphatics (Unadj.)	1000 U	2900	1000 [a]	ug/kg	
	C9- C10 Aromatics (Unadj.)	1000 U	2900	1000 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	131% [b]		70-130%
460-00-4	BFB	111%		70-130%

(a) Value reported is laboratory DL (MDL).
(b) Outside control limits due to moisture content.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11
Lab Sample ID: FA11903-1
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN007496.D	1	01/29/14	NAF	01/27/14	OP50239	GNN325
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C11-C22 Aromatics (Unadj.)	7800 U	10000	7800 [a]	ug/kg	
	C9-C18 Aliphatics	5200 U	10000	5200 [a]	ug/kg	
	C19-C36 Aliphatics	5200 U	10000	5200 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	71%		40-140%
580-13-2	2-Bromonaphthalene	85%		40-140%
84-15-1	o-Terphenyl	60%		40-140%
321-60-8	2-Fluorobiphenyl	83%		40-140%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW12
Lab Sample ID: FA11903-2
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejeune, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084022.D	1	01/28/14	EP	n/a	n/a	VH3177
Run #2							

	Initial Weight
Run #1	3.56 g
Run #2	

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	37.4	74	37	ug/kg	J
71-43-2	Benzene	3.0 U	7.4	3.0	ug/kg	
108-86-1	Bromobenzene	3.0 U	7.4	3.0	ug/kg	
74-97-5	Bromochloromethane	3.7 U	7.4	3.7	ug/kg	
75-27-4	Bromodichloromethane	3.0 U	7.4	3.0	ug/kg	
75-25-2	Bromoform	3.0 U	7.4	3.0	ug/kg	
104-51-8	n-Butylbenzene	3.0 U	7.4	3.0	ug/kg	
135-98-8	sec-Butylbenzene	3.0 U	7.4	3.0	ug/kg	
98-06-6	tert-Butylbenzene	3.0 U	7.4	3.0	ug/kg	
108-90-7	Chlorobenzene	3.0 U	7.4	3.0	ug/kg	
75-00-3	Chloroethane	5.9 U	7.4	5.9	ug/kg	
67-66-3	Chloroform	3.0 U	7.4	3.0	ug/kg	
95-49-8	o-Chlorotoluene	3.0 U	7.4	3.0	ug/kg	
106-43-4	p-Chlorotoluene	3.0 U	7.4	3.0	ug/kg	
56-23-5	Carbon tetrachloride	3.0 U	7.4	3.0	ug/kg	
75-34-3	1,1-Dichloroethane	3.0 U	7.4	3.0	ug/kg	
75-35-4	1,1-Dichloroethylene	3.0 U	7.4	3.0	ug/kg	
563-58-6	1,1-Dichloropropene	3.0 U	7.4	3.0	ug/kg	
106-93-4	1,2-Dibromoethane	3.7 U	7.4	3.7	ug/kg	
107-06-2	1,2-Dichloroethane	3.0 U	7.4	3.0	ug/kg	
78-87-5	1,2-Dichloropropane	3.0 U	7.4	3.0	ug/kg	
142-28-9	1,3-Dichloropropane	3.0 U	7.4	3.0	ug/kg	
108-20-3	Di-Isopropyl ether	3.0 U	7.4	3.0	ug/kg	
594-20-7	2,2-Dichloropropane	3.0 U	7.4	3.0	ug/kg	
124-48-1	Dibromochloromethane	3.0 U	7.4	3.0	ug/kg	
75-71-8	Dichlorodifluoromethane	3.0 U	7.4	3.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	3.0 U	7.4	3.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	3.0 U	7.4	3.0	ug/kg	
541-73-1	m-Dichlorobenzene	3.0 U	7.4	3.0	ug/kg	
95-50-1	o-Dichlorobenzene	3.0 U	7.4	3.0	ug/kg	
106-46-7	p-Dichlorobenzene	3.0 U	7.4	3.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	3.0 U	7.4	3.0	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW12
Lab Sample ID: FA11903-2
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.9

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
10061-02-6	trans-1,3-Dichloropropene	3.0 U	7.4	3.0	ug/kg	
64-17-5	Ethyl alcohol	300 U	590	300	ug/kg	
100-41-4	Ethylbenzene	3.0 U	7.4	3.0	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	3.0 U	7.4	3.0	ug/kg	
591-78-6	2-Hexanone	15 U	37	15	ug/kg	
98-82-8	Isopropylbenzene	3.0 U	7.4	3.0	ug/kg	
99-87-6	p-Isopropyltoluene	3.0 U	7.4	3.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	15 U	37	15	ug/kg	
74-83-9	Methyl bromide	5.9 U	7.4	5.9	ug/kg	
74-87-3	Methyl chloride	5.9 U	7.4	5.9	ug/kg	
75-09-2	Methylene chloride	7.4 U	15	7.4	ug/kg	
78-93-3	Methyl ethyl ketone	15 U	37	15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.0 U	7.4	3.0	ug/kg	
91-20-3	Naphthalene	5.9 U	7.4	5.9	ug/kg	
103-65-1	n-Propylbenzene	3.0 U	7.4	3.0	ug/kg	
100-42-5	Styrene	3.0 U	7.4	3.0	ug/kg	
75-85-4	Tert-Amyl Alcohol	37 U	74	37	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	3.0 U	7.4	3.0	ug/kg	
75-65-0	Tert-Butyl Alcohol	37 U	74	37	ug/kg	
762-75-4	tert-Butyl Formate	37 U	74	37	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	3.0 U	7.4	3.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	3.0 U	7.4	3.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	7.4	3.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	3.7 U	7.4	3.7	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	3.0 U	7.4	3.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	3.7 U	7.4	3.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	3.0 U	7.4	3.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	3.0 U	7.4	3.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.0 U	7.4	3.0	ug/kg	
127-18-4	Tetrachloroethylene	3.0 U	7.4	3.0	ug/kg	
108-88-3	Toluene	3.0 U	7.4	3.0	ug/kg	
79-01-6	Trichloroethylene	3.0 U	7.4	3.0	ug/kg	
75-69-4	Trichlorofluoromethane	5.9 U	7.4	5.9	ug/kg	
75-01-4	Vinyl chloride	3.0 U	7.4	3.0	ug/kg	
108-05-4	Vinyl Acetate	30 U	37	30	ug/kg	
1330-20-7	Xylene (total)	8.9 U	22	8.9	ug/kg	
	m,p-Xylene	5.9 U	15	5.9	ug/kg	
95-47-6	o-Xylene	3.0 U	7.4	3.0	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW12		
Lab Sample ID:	FA11903-2	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8260B	**Percent Solids:**	94.9
Project:	WE03, Camp Lejuene, NC		

VOA List for NC, May 2012

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		75-124%
2037-26-5	Toluene-D8	81%		75-126%
460-00-4	4-Bromofluorobenzene	85%		71-133%
17060-07-0	1,2-Dichloroethane-D4	87%		72-135%

(a) Sample was prepared from a bulk container.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW12
Lab Sample ID: FA11903-2
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U043195.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
65-85-0	Benzoic Acid	350 U	880	350	ug/kg	
95-57-8	2-Chlorophenol	35 U	180	35	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	35 U	180	35	ug/kg	
120-83-2	2,4-Dichlorophenol	35 U	180	35	ug/kg	
105-67-9	2,4-Dimethylphenol	70 U	180	70	ug/kg	
51-28-5	2,4-Dinitrophenol	700 U	880	700	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	140 U	350	140	ug/kg	
95-48-7	2-Methylphenol	35 U	180	35	ug/kg	
	3&4-Methylphenol	70 U	180	70	ug/kg	
88-75-5	2-Nitrophenol	35 U	180	35	ug/kg	
100-02-7	4-Nitrophenol	350 U	880	350	ug/kg	
87-86-5	Pentachlorophenol	350 U	880	350	ug/kg	
108-95-2	Phenol	35 U	180	35	ug/kg	
88-06-2	2,4,6-Trichlorophenol	35 U	180	35	ug/kg	
83-32-9	Acenaphthene	35 U	180	35	ug/kg	
208-96-8	Acenaphthylene	35 U	180	35	ug/kg	
120-12-7	Anthracene	35 U	180	35	ug/kg	
56-55-3	Benzo(a)anthracene	35 U	180	35	ug/kg	
50-32-8	Benzo(a)pyrene	35 U	180	35	ug/kg	
205-99-2	Benzo(b)fluoranthene	35 U	180	35	ug/kg	
191-24-2	Benzo(g,h,i)perylene	35 U	180	35	ug/kg	
207-08-9	Benzo(k)fluoranthene	35 U	180	35	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	35 U	180	35	ug/kg	
85-68-7	Butyl benzyl phthalate	70 U	180	70	ug/kg	
100-51-6	Benzyl Alcohol	70 U	180	70	ug/kg	
91-58-7	2-Chloronaphthalene	35 U	180	35	ug/kg	
106-47-8	4-Chloroaniline	35 U	180	35	ug/kg	
218-01-9	Chrysene	35 U	180	35	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	35 U	180	35	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	35 U	180	35	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	35 U	180	35	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	35 U	180	35	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW12
Lab Sample ID: FA11903-2
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.9

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
95-50-1	1,2-Dichlorobenzene	70 U	180	70	ug/kg	
122-66-7	1,2-Diphenylhydrazine	35 U	180	35	ug/kg	
541-73-1	1,3-Dichlorobenzene	70 U	180	70	ug/kg	
106-46-7	1,4-Dichlorobenzene	70 U	180	70	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	70 U	180	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	35 U	180	35	ug/kg	
132-64-9	Dibenzofuran	35 U	180	35	ug/kg	
84-74-2	Di-n-butyl phthalate	140 U	350	140	ug/kg	
117-84-0	Di-n-octyl phthalate	70 U	180	70	ug/kg	
84-66-2	Diethyl phthalate	140 U	350	140	ug/kg	
131-11-3	Dimethyl phthalate	70 U	180	70	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	140 U	350	140	ug/kg	
206-44-0	Fluoranthene	35 U	180	35	ug/kg	
86-73-7	Fluorene	35 U	180	35	ug/kg	
118-74-1	Hexachlorobenzene	35 U	180	35	ug/kg	
87-68-3	Hexachlorobutadiene	70 U	180	70	ug/kg	
77-47-4	Hexachlorocyclopentadiene	70 U	180	70	ug/kg	
67-72-1	Hexachloroethane	70 U	180	70	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	35 U	180	35	ug/kg	
78-59-1	Isophorone	35 U	180	35	ug/kg	
90-12-0	1-Methylnaphthalene	35 U	180	35	ug/kg	
91-57-6	2-Methylnaphthalene	35 U	180	35	ug/kg	
91-20-3	Naphthalene	35 U	180	35	ug/kg	
98-95-3	Nitrobenzene	35 U	180	35	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	35 U	180	35	ug/kg	
86-30-6	N-Nitrosodiphenylamine	70 U	180	70	ug/kg	
85-01-8	Phenanthrene	35 U	180	35	ug/kg	
129-00-0	Pyrene	35 U	180	35	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	35 U	180	35	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		40-102%
4165-62-2	Phenol-d5	79%		41-100%
118-79-6	2,4,6-Tribromophenol	78%		42-108%
4165-60-0	Nitrobenzene-d5	71%		40-105%
321-60-8	2-Fluorobiphenyl	72%		43-107%
1718-51-0	Terphenyl-d14	102%		45-119%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW12		
Lab Sample ID:	FA11903-2	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	94.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UU006472.D	1	01/30/14	AH	n/a	n/a	GUU313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.60 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C5- C8 Aliphatics (Unadj.)	2700 U	7700	2700 [a]	ug/kg	
	C9- C12 Aliphatics (Unadj.)	2700 U	7700	2700 [a]	ug/kg	
	C9- C10 Aromatics (Unadj.)	2700 U	7700	2700 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	102%		70-130%
460-00-4	BFB	86%		70-130%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW12
Lab Sample ID: FA11903-2
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 94.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN007497.D	1	01/29/14	NAF	01/27/14	OP50239	GNN325
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C11-C22 Aromatics (Unadj.)	7800 U	10000	7800 [a]	ug/kg	
	C9-C18 Aliphatics	5200 U	10000	5200 [a]	ug/kg	
	C19-C36 Aliphatics	5200 U	10000	5200 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	59%		40-140%
580-13-2	2-Bromonaphthalene	74%		40-140%
84-15-1	o-Terphenyl	50%		40-140%
321-60-8	2-Fluorobiphenyl	70%		40-140%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW13
Lab Sample ID: FA11903-3
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejeune, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084023.D	1	01/28/14	EP	n/a	n/a	VH3177
Run #2							

	Initial Weight
Run #1	3.71 g
Run #2	

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	37 U	75	37	ug/kg	
71-43-2	Benzene	3.0 U	7.5	3.0	ug/kg	
108-86-1	Bromobenzene	3.0 U	7.5	3.0	ug/kg	
74-97-5	Bromochloromethane	3.7 U	7.5	3.7	ug/kg	
75-27-4	Bromodichloromethane	3.0 U	7.5	3.0	ug/kg	
75-25-2	Bromoform	3.0 U	7.5	3.0	ug/kg	
104-51-8	n-Butylbenzene	3.0 U	7.5	3.0	ug/kg	
135-98-8	sec-Butylbenzene	3.0 U	7.5	3.0	ug/kg	
98-06-6	tert-Butylbenzene	3.0 U	7.5	3.0	ug/kg	
108-90-7	Chlorobenzene	3.0 U	7.5	3.0	ug/kg	
75-00-3	Chloroethane	6.0 U	7.5	6.0	ug/kg	
67-66-3	Chloroform	3.0 U	7.5	3.0	ug/kg	
95-49-8	o-Chlorotoluene	3.0 U	7.5	3.0	ug/kg	
106-43-4	p-Chlorotoluene	3.0 U	7.5	3.0	ug/kg	
56-23-5	Carbon tetrachloride	3.0 U	7.5	3.0	ug/kg	
75-34-3	1,1-Dichloroethane	3.0 U	7.5	3.0	ug/kg	
75-35-4	1,1-Dichloroethylene	3.0 U	7.5	3.0	ug/kg	
563-58-6	1,1-Dichloropropene	3.0 U	7.5	3.0	ug/kg	
106-93-4	1,2-Dibromoethane	3.7 U	7.5	3.7	ug/kg	
107-06-2	1,2-Dichloroethane	3.0 U	7.5	3.0	ug/kg	
78-87-5	1,2-Dichloropropane	3.0 U	7.5	3.0	ug/kg	
142-28-9	1,3-Dichloropropane	3.0 U	7.5	3.0	ug/kg	
108-20-3	Di-Isopropyl ether	3.0 U	7.5	3.0	ug/kg	
594-20-7	2,2-Dichloropropane	3.0 U	7.5	3.0	ug/kg	
124-48-1	Dibromochloromethane	3.0 U	7.5	3.0	ug/kg	
75-71-8	Dichlorodifluoromethane	3.0 U	7.5	3.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	3.0 U	7.5	3.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	3.0 U	7.5	3.0	ug/kg	
541-73-1	m-Dichlorobenzene	3.0 U	7.5	3.0	ug/kg	
95-50-1	o-Dichlorobenzene	3.0 U	7.5	3.0	ug/kg	
106-46-7	p-Dichlorobenzene	3.0 U	7.5	3.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	3.0 U	7.5	3.0	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW13
Lab Sample ID: FA11903-3
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.3

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
10061-02-6	trans-1,3-Dichloropropene	3.0 U	7.5	3.0	ug/kg	
64-17-5	Ethyl alcohol	300 U	600	300	ug/kg	
100-41-4	Ethylbenzene	3.0 U	7.5	3.0	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	3.0 U	7.5	3.0	ug/kg	
591-78-6	2-Hexanone	15 U	37	15	ug/kg	
98-82-8	Isopropylbenzene	3.0 U	7.5	3.0	ug/kg	
99-87-6	p-Isopropyltoluene	3.0 U	7.5	3.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	15 U	37	15	ug/kg	
74-83-9	Methyl bromide	6.0 U	7.5	6.0	ug/kg	
74-87-3	Methyl chloride	6.0 U	7.5	6.0	ug/kg	
75-09-2	Methylene chloride	7.5 U	15	7.5	ug/kg	
78-93-3	Methyl ethyl ketone	15 U	37	15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.0 U	7.5	3.0	ug/kg	
91-20-3	Naphthalene	6.0 U	7.5	6.0	ug/kg	
103-65-1	n-Propylbenzene	3.0 U	7.5	3.0	ug/kg	
100-42-5	Styrene	3.0 U	7.5	3.0	ug/kg	
75-85-4	Tert-Amyl Alcohol	37 U	75	37	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	3.0 U	7.5	3.0	ug/kg	
75-65-0	Tert-Butyl Alcohol	37 U	75	37	ug/kg	
762-75-4	tert-Butyl Formate	37 U	75	37	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	3.0 U	7.5	3.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	3.0 U	7.5	3.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	7.5	3.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	3.7 U	7.5	3.7	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	3.0 U	7.5	3.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	3.7 U	7.5	3.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	3.0 U	7.5	3.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	3.0 U	7.5	3.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.0 U	7.5	3.0	ug/kg	
127-18-4	Tetrachloroethylene	3.0 U	7.5	3.0	ug/kg	
108-88-3	Toluene	3.0 U	7.5	3.0	ug/kg	
79-01-6	Trichloroethylene	3.0 U	7.5	3.0	ug/kg	
75-69-4	Trichlorofluoromethane	6.0 U	7.5	6.0	ug/kg	
75-01-4	Vinyl chloride	3.0 U	7.5	3.0	ug/kg	
108-05-4	Vinyl Acetate	30 U	37	30	ug/kg	
1330-20-7	Xylene (total)	9.0 U	22	9.0	ug/kg	
	m,p-Xylene	6.0 U	15	6.0	ug/kg	
95-47-6	o-Xylene	3.0 U	7.5	3.0	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW13		
Lab Sample ID:	FA11903-3	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8260B	**Percent Solids:**	90.3
Project:	WE03, Camp Lejuene, NC		

VOA List for NC, May 2012

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		75-124%
2037-26-5	Toluene-D8	84%		75-126%
460-00-4	4-Bromofluorobenzene	83%		71-133%
17060-07-0	1,2-Dichloroethane-D4	87%		72-135%

(a) Sample was prepared from a bulk container.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW13
Lab Sample ID: FA11903-3
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U043196.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
Run #2							

	Initial Weight	Final Volume
Run #1	29.8 g	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
65-85-0	Benzoic Acid	370 U	930	370	ug/kg	
95-57-8	2-Chlorophenol	37 U	190	37	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	37 U	190	37	ug/kg	
120-83-2	2,4-Dichlorophenol	37 U	190	37	ug/kg	
105-67-9	2,4-Dimethylphenol	74 U	190	74	ug/kg	
51-28-5	2,4-Dinitrophenol	740 U	930	740	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	150 U	370	150	ug/kg	
95-48-7	2-Methylphenol	37 U	190	37	ug/kg	
	3&4-Methylphenol	74 U	190	74	ug/kg	
88-75-5	2-Nitrophenol	37 U	190	37	ug/kg	
100-02-7	4-Nitrophenol	370 U	930	370	ug/kg	
87-86-5	Pentachlorophenol	370 U	930	370	ug/kg	
108-95-2	Phenol	37 U	190	37	ug/kg	
88-06-2	2,4,6-Trichlorophenol	37 U	190	37	ug/kg	
83-32-9	Acenaphthene	37 U	190	37	ug/kg	
208-96-8	Acenaphthylene	37 U	190	37	ug/kg	
120-12-7	Anthracene	37 U	190	37	ug/kg	
56-55-3	Benzo(a)anthracene	37 U	190	37	ug/kg	
50-32-8	Benzo(a)pyrene	40.8	190	37	ug/kg	J
205-99-2	Benzo(b)fluoranthene	37 U	190	37	ug/kg	
191-24-2	Benzo(g,h,i)perylene	37 U	190	37	ug/kg	
207-08-9	Benzo(k)fluoranthene	37 U	190	37	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	37 U	190	37	ug/kg	
85-68-7	Butyl benzyl phthalate	74 U	190	74	ug/kg	
100-51-6	Benzyl Alcohol	74 U	190	74	ug/kg	
91-58-7	2-Chloronaphthalene	37 U	190	37	ug/kg	
106-47-8	4-Chloroaniline	37 U	190	37	ug/kg	
218-01-9	Chrysene	37 U	190	37	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	37 U	190	37	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	37 U	190	37	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	37 U	190	37	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	37 U	190	37	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW13
Lab Sample ID: FA11903-3
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.3

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
95-50-1	1,2-Dichlorobenzene	74 U	190	74	ug/kg	
122-66-7	1,2-Diphenylhydrazine	37 U	190	37	ug/kg	
541-73-1	1,3-Dichlorobenzene	74 U	190	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	74 U	190	74	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	74 U	190	74	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	37 U	190	37	ug/kg	
132-64-9	Dibenzofuran	37 U	190	37	ug/kg	
84-74-2	Di-n-butyl phthalate	150 U	370	150	ug/kg	
117-84-0	Di-n-octyl phthalate	74 U	190	74	ug/kg	
84-66-2	Diethyl phthalate	150 U	370	150	ug/kg	
131-11-3	Dimethyl phthalate	74 U	190	74	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	150 U	370	150	ug/kg	
206-44-0	Fluoranthene	37 U	190	37	ug/kg	
86-73-7	Fluorene	37 U	190	37	ug/kg	
118-74-1	Hexachlorobenzene	37 U	190	37	ug/kg	
87-68-3	Hexachlorobutadiene	74 U	190	74	ug/kg	
77-47-4	Hexachlorocyclopentadiene	74 U	190	74	ug/kg	
67-72-1	Hexachloroethane	74 U	190	74	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	37 U	190	37	ug/kg	
78-59-1	Isophorone	37 U	190	37	ug/kg	
90-12-0	1-Methylnaphthalene	37 U	190	37	ug/kg	
91-57-6	2-Methylnaphthalene	37 U	190	37	ug/kg	
91-20-3	Naphthalene	37 U	190	37	ug/kg	
98-95-3	Nitrobenzene	37 U	190	37	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	37 U	190	37	ug/kg	
86-30-6	N-Nitrosodiphenylamine	74 U	190	74	ug/kg	
85-01-8	Phenanthrene	37 U	190	37	ug/kg	
129-00-0	Pyrene	69.4	190	37	ug/kg	J
120-82-1	1,2,4-Trichlorobenzene	37 U	190	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		40-102%
4165-62-2	Phenol-d5	80%		41-100%
118-79-6	2,4,6-Tribromophenol	79%		42-108%
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	75%		43-107%
1718-51-0	Terphenyl-d14	99%		45-119%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW13		
Lab Sample ID:	FA11903-3	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	90.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UU006473.D	1	01/30/14	AH	n/a	n/a	GUU313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.70 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C5- C8 Aliphatics (Unadj.)	2900 U	8200	2900 [a]	ug/kg	
	C9- C12 Aliphatics (Unadj.)	2900 U	8200	2900 [a]	ug/kg	
	C9- C10 Aromatics (Unadj.)	2900 U	8200	2900 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	104%		70-130%
460-00-4	BFB	88%		70-130%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW13
Lab Sample ID: FA11903-3
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN007498.D	1	01/29/14	NAF	01/27/14	OP50239	GNN325
Run #2							

	Initial Weight	Final Volume
Run #1	19.8 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C11-C22 Aromatics (Unadj.)	8400 U	11000	8400 [a]	ug/kg	
	C9-C18 Aliphatics	5600 U	11000	5600 [a]	ug/kg	
	C19-C36 Aliphatics	5600 U	11000	5600 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	65%		40-140%
580-13-2	2-Bromonaphthalene	86%		40-140%
84-15-1	o-Terphenyl	59%		40-140%
321-60-8	2-Fluorobiphenyl	82%		40-140%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW14
Lab Sample ID: FA11903-4
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejeune, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084024.D	1	01/28/14	EP	n/a	n/a	VH3177
Run #2							

	Initial Weight
Run #1	3.52 g
Run #2	

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	580	78	39	ug/kg	
71-43-2	Benzene	3.1 U	7.8	3.1	ug/kg	
108-86-1	Bromobenzene	3.1 U	7.8	3.1	ug/kg	
74-97-5	Bromochloromethane	3.9 U	7.8	3.9	ug/kg	
75-27-4	Bromodichloromethane	3.1 U	7.8	3.1	ug/kg	
75-25-2	Bromoform	3.1 U	7.8	3.1	ug/kg	
104-51-8	n-Butylbenzene	3.1 U	7.8	3.1	ug/kg	
135-98-8	sec-Butylbenzene	3.1 U	7.8	3.1	ug/kg	
98-06-6	tert-Butylbenzene	3.1 U	7.8	3.1	ug/kg	
108-90-7	Chlorobenzene	3.1 U	7.8	3.1	ug/kg	
75-00-3	Chloroethane	6.3 U	7.8	6.3	ug/kg	
67-66-3	Chloroform	3.1 U	7.8	3.1	ug/kg	
95-49-8	o-Chlorotoluene	3.1 U	7.8	3.1	ug/kg	
106-43-4	p-Chlorotoluene	3.1 U	7.8	3.1	ug/kg	
56-23-5	Carbon tetrachloride	3.1 U	7.8	3.1	ug/kg	
75-34-3	1,1-Dichloroethane	3.1 U	7.8	3.1	ug/kg	
75-35-4	1,1-Dichloroethylene	3.1 U	7.8	3.1	ug/kg	
563-58-6	1,1-Dichloropropene	3.1 U	7.8	3.1	ug/kg	
106-93-4	1,2-Dibromoethane	3.9 U	7.8	3.9	ug/kg	
107-06-2	1,2-Dichloroethane	3.1 U	7.8	3.1	ug/kg	
78-87-5	1,2-Dichloropropane	3.1 U	7.8	3.1	ug/kg	
142-28-9	1,3-Dichloropropane	3.1 U	7.8	3.1	ug/kg	
108-20-3	Di-Isopropyl ether	3.1 U	7.8	3.1	ug/kg	
594-20-7	2,2-Dichloropropane	3.1 U	7.8	3.1	ug/kg	
124-48-1	Dibromochloromethane	3.1 U	7.8	3.1	ug/kg	
75-71-8	Dichlorodifluoromethane	3.1 U	7.8	3.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	3.1 U	7.8	3.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	3.1 U	7.8	3.1	ug/kg	
541-73-1	m-Dichlorobenzene	3.1 U	7.8	3.1	ug/kg	
95-50-1	o-Dichlorobenzene	3.1 U	7.8	3.1	ug/kg	
106-46-7	p-Dichlorobenzene	3.1 U	7.8	3.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	3.1 U	7.8	3.1	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW14
Lab Sample ID: FA11903-4
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.9

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
10061-02-6	trans-1,3-Dichloropropene	3.1 U	7.8	3.1	ug/kg	
64-17-5	Ethyl alcohol	310 U	630	310	ug/kg	
100-41-4	Ethylbenzene	3.1 U	7.8	3.1	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	3.1 U	7.8	3.1	ug/kg	
591-78-6	2-Hexanone	16 U	39	16	ug/kg	
98-82-8	Isopropylbenzene	3.1 U	7.8	3.1	ug/kg	
99-87-6	p-Isopropyltoluene	3.1 U	7.8	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	16 U	39	16	ug/kg	
74-83-9	Methyl bromide	6.3 U	7.8	6.3	ug/kg	
74-87-3	Methyl chloride	6.3 U	7.8	6.3	ug/kg	
75-09-2	Methylene chloride	7.8 U	16	7.8	ug/kg	
78-93-3	Methyl ethyl ketone	16 U	39	16	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.1 U	7.8	3.1	ug/kg	
91-20-3	Naphthalene	6.3 U	7.8	6.3	ug/kg	
103-65-1	n-Propylbenzene	3.1 U	7.8	3.1	ug/kg	
100-42-5	Styrene	3.1 U	7.8	3.1	ug/kg	
75-85-4	Tert-Amyl Alcohol	39 U	78	39	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	3.1 U	7.8	3.1	ug/kg	
75-65-0	Tert-Butyl Alcohol	39 U	78	39	ug/kg	
762-75-4	tert-Butyl Formate	39 U	78	39	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	3.1 U	7.8	3.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	3.1 U	7.8	3.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	3.1 U	7.8	3.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	3.9 U	7.8	3.9	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	7.8	3.1	ug/kg	
96-18-4	1,2,3-Trichloropropane	3.9 U	7.8	3.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	3.1 U	7.8	3.1	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	3.1 U	7.8	3.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.1 U	7.8	3.1	ug/kg	
127-18-4	Tetrachloroethylene	3.1 U	7.8	3.1	ug/kg	
108-88-3	Toluene	3.1 U	7.8	3.1	ug/kg	
79-01-6	Trichloroethylene	3.1 U	7.8	3.1	ug/kg	
75-69-4	Trichlorofluoromethane	6.3 U	7.8	6.3	ug/kg	
75-01-4	Vinyl chloride	3.1 U	7.8	3.1	ug/kg	
108-05-4	Vinyl Acetate	31 U	39	31	ug/kg	
1330-20-7	Xylene (total)	9.4 U	23	9.4	ug/kg	
	m,p-Xylene	6.3 U	16	6.3	ug/kg	
95-47-6	o-Xylene	3.1 U	7.8	3.1	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW14		
Lab Sample ID:	FA11903-4	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8260B	**Percent Solids:**	90.9
Project:	WE03, Camp Lejuene, NC		

VOA List for NC, May 2012

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		75-124%
2037-26-5	Toluene-D8	84%		75-126%
460-00-4	4-Bromofluorobenzene	88%		71-133%
17060-07-0	1,2-Dichloroethane-D4	86%		72-135%

(a) Sample was prepared from a bulk container.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW14
Lab Sample ID: FA11903-4
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U043197.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
65-85-0	Benzoic Acid	360 U	910	360	ug/kg	
95-57-8	2-Chlorophenol	36 U	180	36	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	36 U	180	36	ug/kg	
120-83-2	2,4-Dichlorophenol	36 U	180	36	ug/kg	
105-67-9	2,4-Dimethylphenol	73 U	180	73	ug/kg	
51-28-5	2,4-Dinitrophenol	730 U	910	730	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	150 U	360	150	ug/kg	
95-48-7	2-Methylphenol	36 U	180	36	ug/kg	
	3&4-Methylphenol	73 U	180	73	ug/kg	
88-75-5	2-Nitrophenol	36 U	180	36	ug/kg	
100-02-7	4-Nitrophenol	360 U	910	360	ug/kg	
87-86-5	Pentachlorophenol	360 U	910	360	ug/kg	
108-95-2	Phenol	36 U	180	36	ug/kg	
88-06-2	2,4,6-Trichlorophenol	36 U	180	36	ug/kg	
83-32-9	Acenaphthene	36 U	180	36	ug/kg	
208-96-8	Acenaphthylene	36 U	180	36	ug/kg	
120-12-7	Anthracene	36 U	180	36	ug/kg	
56-55-3	Benzo(a)anthracene	36 U	180	36	ug/kg	
50-32-8	Benzo(a)pyrene	36 U	180	36	ug/kg	
205-99-2	Benzo(b)fluoranthene	36 U	180	36	ug/kg	
191-24-2	Benzo(g,h,i)perylene	36 U	180	36	ug/kg	
207-08-9	Benzo(k)fluoranthene	36 U	180	36	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	36 U	180	36	ug/kg	
85-68-7	Butyl benzyl phthalate	73 U	180	73	ug/kg	
100-51-6	Benzyl Alcohol	73 U	180	73	ug/kg	
91-58-7	2-Chloronaphthalene	36 U	180	36	ug/kg	
106-47-8	4-Chloroaniline	36 U	180	36	ug/kg	
218-01-9	Chrysene	36 U	180	36	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	36 U	180	36	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	36 U	180	36	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	36 U	180	36	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	36 U	180	36	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW14
Lab Sample ID: FA11903-4
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 90.9

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
95-50-1	1,2-Dichlorobenzene	73 U	180	73	ug/kg	
122-66-7	1,2-Diphenylhydrazine	36 U	180	36	ug/kg	
541-73-1	1,3-Dichlorobenzene	73 U	180	73	ug/kg	
106-46-7	1,4-Dichlorobenzene	73 U	180	73	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	73 U	180	73	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	36 U	180	36	ug/kg	
132-64-9	Dibenzofuran	36 U	180	36	ug/kg	
84-74-2	Di-n-butyl phthalate	150 U	360	150	ug/kg	
117-84-0	Di-n-octyl phthalate	73 U	180	73	ug/kg	
84-66-2	Diethyl phthalate	150 U	360	150	ug/kg	
131-11-3	Dimethyl phthalate	73 U	180	73	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	150 U	360	150	ug/kg	
206-44-0	Fluoranthene	36 U	180	36	ug/kg	
86-73-7	Fluorene	36 U	180	36	ug/kg	
118-74-1	Hexachlorobenzene	36 U	180	36	ug/kg	
87-68-3	Hexachlorobutadiene	73 U	180	73	ug/kg	
77-47-4	Hexachlorocyclopentadiene	73 U	180	73	ug/kg	
67-72-1	Hexachloroethane	73 U	180	73	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	36 U	180	36	ug/kg	
78-59-1	Isophorone	36 U	180	36	ug/kg	
90-12-0	1-Methylnaphthalene	36 U	180	36	ug/kg	
91-57-6	2-Methylnaphthalene	36 U	180	36	ug/kg	
91-20-3	Naphthalene	36 U	180	36	ug/kg	
98-95-3	Nitrobenzene	36 U	180	36	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	36 U	180	36	ug/kg	
86-30-6	N-Nitrosodiphenylamine	73 U	180	73	ug/kg	
85-01-8	Phenanthrene	36 U	180	36	ug/kg	
129-00-0	Pyrene	36 U	180	36	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	36 U	180	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	87%		40-102%
4165-62-2	Phenol-d5	87%		41-100%
118-79-6	2,4,6-Tribromophenol	85%		42-108%
4165-60-0	Nitrobenzene-d5	79%		40-105%
321-60-8	2-Fluorobiphenyl	80%		43-107%
1718-51-0	Terphenyl-d14	109%		45-119%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW14		
Lab Sample ID:	FA11903-4	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	90.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UU006474.D	1	01/30/14	AH	n/a	n/a	GUU313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.52 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C5- C8 Aliphatics (Unadj.)	3000 U	8500	3000 [a]	ug/kg	
	C9- C12 Aliphatics (Unadj.)	3000 U	8500	3000 [a]	ug/kg	
	C9- C10 Aromatics (Unadj.)	3000 U	8500	3000 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	104%		70-130%
460-00-4	BFB	88%		70-130%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW14		
Lab Sample ID:	FA11903-4	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	90.9
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN007502.D	1	01/30/14	NAF	01/27/14	OP50239	GNN325
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C11-C22 Aromatics (Unadj.)	8200 U	11000	8200 [a]	ug/kg	
	C9-C18 Aliphatics	5400 U	11000	5400 [a]	ug/kg	
	C19-C36 Aliphatics	5400 U	11000	5400 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	80%		40-140%
580-13-2	2-Bromonaphthalene	80%		40-140%
84-15-1	o-Terphenyl	66%		40-140%
321-60-8	2-Fluorobiphenyl	79%		40-140%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11A
Lab Sample ID: FA11903-5
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejeune, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 91.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084025.D	1	01/28/14	EP	n/a	n/a	VH3177
Run #2							

	Initial Weight
Run #1	3.58 g
Run #2	

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	38 U	77	38	ug/kg	
71-43-2	Benzene	3.1 U	7.7	3.1	ug/kg	
108-86-1	Bromobenzene	3.1 U	7.7	3.1	ug/kg	
74-97-5	Bromochloromethane	3.8 U	7.7	3.8	ug/kg	
75-27-4	Bromodichloromethane	3.1 U	7.7	3.1	ug/kg	
75-25-2	Bromoform	3.1 U	7.7	3.1	ug/kg	
104-51-8	n-Butylbenzene	3.1 U	7.7	3.1	ug/kg	
135-98-8	sec-Butylbenzene	3.1 U	7.7	3.1	ug/kg	
98-06-6	tert-Butylbenzene	3.1 U	7.7	3.1	ug/kg	
108-90-7	Chlorobenzene	3.1 U	7.7	3.1	ug/kg	
75-00-3	Chloroethane	6.1 U	7.7	6.1	ug/kg	
67-66-3	Chloroform	3.1 U	7.7	3.1	ug/kg	
95-49-8	o-Chlorotoluene	3.1 U	7.7	3.1	ug/kg	
106-43-4	p-Chlorotoluene	3.1 U	7.7	3.1	ug/kg	
56-23-5	Carbon tetrachloride	3.1 U	7.7	3.1	ug/kg	
75-34-3	1,1-Dichloroethane	3.1 U	7.7	3.1	ug/kg	
75-35-4	1,1-Dichloroethylene	3.1 U	7.7	3.1	ug/kg	
563-58-6	1,1-Dichloropropene	3.1 U	7.7	3.1	ug/kg	
106-93-4	1,2-Dibromoethane	3.8 U	7.7	3.8	ug/kg	
107-06-2	1,2-Dichloroethane	3.1 U	7.7	3.1	ug/kg	
78-87-5	1,2-Dichloropropane	3.1 U	7.7	3.1	ug/kg	
142-28-9	1,3-Dichloropropane	3.1 U	7.7	3.1	ug/kg	
108-20-3	Di-Isopropyl ether	3.1 U	7.7	3.1	ug/kg	
594-20-7	2,2-Dichloropropane	3.1 U	7.7	3.1	ug/kg	
124-48-1	Dibromochloromethane	3.1 U	7.7	3.1	ug/kg	
75-71-8	Dichlorodifluoromethane	3.1 U	7.7	3.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	3.1 U	7.7	3.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	3.1 U	7.7	3.1	ug/kg	
541-73-1	m-Dichlorobenzene	3.1 U	7.7	3.1	ug/kg	
95-50-1	o-Dichlorobenzene	3.1 U	7.7	3.1	ug/kg	
106-46-7	p-Dichlorobenzene	3.1 U	7.7	3.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	3.1 U	7.7	3.1	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11A
Lab Sample ID: FA11903-5
Matrix: SO - Soil
Method: SW846 8260B
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 91.1

VOA List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
10061-02-6	trans-1,3-Dichloropropene	3.1 U	7.7	3.1	ug/kg	
64-17-5	Ethyl alcohol	310 U	610	310	ug/kg	
100-41-4	Ethylbenzene	3.1 U	7.7	3.1	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	3.1 U	7.7	3.1	ug/kg	
591-78-6	2-Hexanone	15 U	38	15	ug/kg	
98-82-8	Isopropylbenzene	3.1 U	7.7	3.1	ug/kg	
99-87-6	p-Isopropyltoluene	3.1 U	7.7	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	15 U	38	15	ug/kg	
74-83-9	Methyl bromide	6.1 U	7.7	6.1	ug/kg	
74-87-3	Methyl chloride	6.1 U	7.7	6.1	ug/kg	
75-09-2	Methylene chloride	7.7 U	15	7.7	ug/kg	
78-93-3	Methyl ethyl ketone	15 U	38	15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.1 U	7.7	3.1	ug/kg	
91-20-3	Naphthalene	6.1 U	7.7	6.1	ug/kg	
103-65-1	n-Propylbenzene	3.1 U	7.7	3.1	ug/kg	
100-42-5	Styrene	3.1 U	7.7	3.1	ug/kg	
75-85-4	Tert-Amyl Alcohol	38 U	77	38	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	3.1 U	7.7	3.1	ug/kg	
75-65-0	Tert-Butyl Alcohol	38 U	77	38	ug/kg	
762-75-4	tert-Butyl Formate	38 U	77	38	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	3.1 U	7.7	3.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	3.1 U	7.7	3.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	3.1 U	7.7	3.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	3.8 U	7.7	3.8	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	7.7	3.1	ug/kg	
96-18-4	1,2,3-Trichloropropane	3.8 U	7.7	3.8	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	3.1 U	7.7	3.1	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	3.1 U	7.7	3.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.1 U	7.7	3.1	ug/kg	
127-18-4	Tetrachloroethylene	3.1 U	7.7	3.1	ug/kg	
108-88-3	Toluene	3.1 U	7.7	3.1	ug/kg	
79-01-6	Trichloroethylene	3.1 U	7.7	3.1	ug/kg	
75-69-4	Trichlorofluoromethane	6.1 U	7.7	6.1	ug/kg	
75-01-4	Vinyl chloride	3.1 U	7.7	3.1	ug/kg	
108-05-4	Vinyl Acetate	31 U	38	31	ug/kg	
1330-20-7	Xylene (total)	9.2 U	23	9.2	ug/kg	
	m,p-Xylene	6.1 U	15	6.1	ug/kg	
95-47-6	o-Xylene	3.1 U	7.7	3.1	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW11A		
Lab Sample ID:	FA11903-5	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8260B	**Percent Solids:**	91.1
Project:	WE03, Camp Lejuene, NC		

VOA List for NC, May 2012

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		75-124%
2037-26-5	Toluene-D8	86%		75-126%
460-00-4	4-Bromofluorobenzene	80%		71-133%
17060-07-0	1,2-Dichloroethane-D4	86%		72-135%

(a) Sample was prepared from a bulk container.

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11A
Lab Sample ID: FA11903-5
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 91.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U043200.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
65-85-0	Benzoic Acid	370 U	910	370	ug/kg	
95-57-8	2-Chlorophenol	37 U	180	37	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	37 U	180	37	ug/kg	
120-83-2	2,4-Dichlorophenol	37 U	180	37	ug/kg	
105-67-9	2,4-Dimethylphenol	73 U	180	73	ug/kg	
51-28-5	2,4-Dinitrophenol	730 U	910	730	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	150 U	370	150	ug/kg	
95-48-7	2-Methylphenol	37 U	180	37	ug/kg	
	3&4-Methylphenol	73 U	180	73	ug/kg	
88-75-5	2-Nitrophenol	37 U	180	37	ug/kg	
100-02-7	4-Nitrophenol	370 U	910	370	ug/kg	
87-86-5	Pentachlorophenol	370 U	910	370	ug/kg	
108-95-2	Phenol	37 U	180	37	ug/kg	
88-06-2	2,4,6-Trichlorophenol	37 U	180	37	ug/kg	
83-32-9	Acenaphthene	37 U	180	37	ug/kg	
208-96-8	Acenaphthylene	37 U	180	37	ug/kg	
120-12-7	Anthracene	37 U	180	37	ug/kg	
56-55-3	Benzo(a)anthracene	37 U	180	37	ug/kg	
50-32-8	Benzo(a)pyrene	37 U	180	37	ug/kg	
205-99-2	Benzo(b)fluoranthene	37 U	180	37	ug/kg	
191-24-2	Benzo(g,h,i)perylene	37 U	180	37	ug/kg	
207-08-9	Benzo(k)fluoranthene	37 U	180	37	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	37 U	180	37	ug/kg	
85-68-7	Butyl benzyl phthalate	73 U	180	73	ug/kg	
100-51-6	Benzyl Alcohol	73 U	180	73	ug/kg	
91-58-7	2-Chloronaphthalene	37 U	180	37	ug/kg	
106-47-8	4-Chloroaniline	37 U	180	37	ug/kg	
218-01-9	Chrysene	37 U	180	37	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	37 U	180	37	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	37 U	180	37	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	37 U	180	37	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	37 U	180	37	ug/kg	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11A
Lab Sample ID: FA11903-5
Matrix: SO - Soil
Method: SW846 8270D SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 91.1

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
95-50-1	1,2-Dichlorobenzene	73 U	180	73	ug/kg	
122-66-7	1,2-Diphenylhydrazine	37 U	180	37	ug/kg	
541-73-1	1,3-Dichlorobenzene	73 U	180	73	ug/kg	
106-46-7	1,4-Dichlorobenzene	73 U	180	73	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	73 U	180	73	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	37 U	180	37	ug/kg	
132-64-9	Dibenzofuran	37 U	180	37	ug/kg	
84-74-2	Di-n-butyl phthalate	150 U	370	150	ug/kg	
117-84-0	Di-n-octyl phthalate	73 U	180	73	ug/kg	
84-66-2	Diethyl phthalate	150 U	370	150	ug/kg	
131-11-3	Dimethyl phthalate	73 U	180	73	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	150 U	370	150	ug/kg	
206-44-0	Fluoranthene	37 U	180	37	ug/kg	
86-73-7	Fluorene	37 U	180	37	ug/kg	
118-74-1	Hexachlorobenzene	37 U	180	37	ug/kg	
87-68-3	Hexachlorobutadiene	73 U	180	73	ug/kg	
77-47-4	Hexachlorocyclopentadiene	73 U	180	73	ug/kg	
67-72-1	Hexachloroethane	73 U	180	73	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	37 U	180	37	ug/kg	
78-59-1	Isophorone	37 U	180	37	ug/kg	
90-12-0	1-Methylnaphthalene	37 U	180	37	ug/kg	
91-57-6	2-Methylnaphthalene	37 U	180	37	ug/kg	
91-20-3	Naphthalene	37 U	180	37	ug/kg	
98-95-3	Nitrobenzene	37 U	180	37	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	37 U	180	37	ug/kg	
86-30-6	N-Nitrosodiphenylamine	73 U	180	73	ug/kg	
85-01-8	Phenanthrene	37 U	180	37	ug/kg	
129-00-0	Pyrene	37 U	180	37	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	37 U	180	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	75%		40-102%
4165-62-2	Phenol-d5	74%		41-100%
118-79-6	2,4,6-Tribromophenol	76%		42-108%
4165-60-0	Nitrobenzene-d5	68%		40-105%
321-60-8	2-Fluorobiphenyl	70%		43-107%
1718-51-0	Terphenyl-d14	95%		45-119%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SW11A		
Lab Sample ID:	FA11903-5	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	91.1
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UU006475.D	1	01/30/14	AH	n/a	n/a	GUU313
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.57 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C5- C8 Aliphatics (Unadj.)	2900 U	8300	2900 [a]	ug/kg	
	C9- C12 Aliphatics (Unadj.)	2900 U	8300	2900 [a]	ug/kg	
	C9- C10 Aromatics (Unadj.)	2900 U	8300	2900 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	108%		70-130%
460-00-4	BFB	92%		70-130%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SW11A
Lab Sample ID: FA11903-5
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 91.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN007499.D	1	01/30/14	NAF	01/27/14	OP50239	GNN325
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C11-C22 Aromatics (Unadj.)	8200 U	11000	8200 [a]	ug/kg	
	C9-C18 Aliphatics	5500 U	11000	5500 [a]	ug/kg	
	C19-C36 Aliphatics	5500 U	11000	5500 [a]	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	73%		40-140%
580-13-2	2-Bromonaphthalene	99%		40-140%
84-15-1	o-Terphenyl	65%		40-140%
321-60-8	2-Fluorobiphenyl	97%		40-140%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SP01		
Lab Sample ID:	FA11903-6	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8015C	**Percent Solids:**	87.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062185.D	1	01/24/14	MM	n/a	n/a	GUV3319
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	14.3 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH-GRO (C6-C10)	1.4 U	2.7	1.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		56-149%
98-08-8	aaa-Trifluorotoluene	103%		66-132%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SP01		
Lab Sample ID:	FA11903-6	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8082A SW846 3550C	**Percent Solids:**	87.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM09510.D	1	01/27/14	MV	01/24/14	OP50229	GMM210
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
12674-11-2	Aroclor 1016	9.5 U	19	9.5	ug/kg	
11104-28-2	Aroclor 1221	15 U	19	15	ug/kg	
11141-16-5	Aroclor 1232	15 U	19	15	ug/kg	
53469-21-9	Aroclor 1242	9.5 U	19	9.5	ug/kg	
12672-29-6	Aroclor 1248	9.5 U	19	9.5	ug/kg	
11097-69-1	Aroclor 1254	9.5 U	19	9.5	ug/kg	
11096-82-5	Aroclor 1260	9.5 U	19	9.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		44-126%
2051-24-3	Decachlorobiphenyl	85%		41-145%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SP01
Lab Sample ID: FA11903-6
Matrix: SO - Soil
Method: SW846 8015C SW846 3550C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 87.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ001462.D	1	01/27/14	SJL	01/24/14	OP50225	GJJ52
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	TPH (C10-C28)	42.7	4.7	3.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		56-122%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SP01
Lab Sample ID: FA11903-6
Matrix: SO - Soil
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 87.3

General Chemistry

Analyte	Result	LOQ	LOD	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.9			su	1	01/28/14 19:40	FN	SW846 CHAP7
Cyanide Reactivity	1.5 U	1.5	1.5 [a]	mg/kg	1	01/28/14 13:17	VK	SW846 CHAP7
Ignitability (Flashpoint) [b]	> 200			Deg. F	1	01/28/14 09:00	KC	SW846 1010
Solids, Percent	87.3			%	1	01/25/14 16:25	FN	SM19 2540G
Sulfide Reactivity	57 U	57	57 [a]	mg/kg	1	01/27/14 14:40	LE	SW846 CHAP7

(a) Value reported is laboratory DL (MDL).
(b) Not ignitable.

LOQ = Limit of Quantitation
LOD = Limit of Detection

U = Indicates a result < LOD
J = Indicates a result > = LOD but < LOQ

Report of Analysis

Client Sample ID:	AS705-UST-SP01		
Lab Sample ID:	FA11903-6L	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8260B SW846 1311	**Percent Solids:**	87.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J091579.D	10	01/28/14	DP	01/27/14	OP50243	VJ4579
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	LOQ	LOD	Units	Q
71-43-2	Benzene	0.0050 U	D018	0.50	0.010	0.0050	mg/l	
108-90-7	Chlorobenzene	0.0050 U	D021	100	0.010	0.0050	mg/l	
67-66-3	Chloroform	0.0050 U	D022	6.0	0.010	0.0050	mg/l	
56-23-5	Carbon tetrachloride	0.0050 U	D019	0.50	0.010	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene	0.0050 U	D029	0.70	0.010	0.0050	mg/l	
107-06-2	1,2-Dichloroethane	0.0050 U	D028	0.50	0.010	0.0050	mg/l	
106-46-7	p-Dichlorobenzene	0.0050 U	D027	7.5	0.010	0.0050	mg/l	
78-93-3	Methyl ethyl ketone	0.040 U	D035	200	0.050	0.040	mg/l	
127-18-4	Tetrachloroethylene	0.0050 U	D039	0.70	0.010	0.0050	mg/l	
79-01-6	Trichloroethylene	0.0090	D040	0.50	0.010	0.0050	mg/l	JB
75-01-4	Vinyl chloride	0.0050 U	D043	0.20	0.010	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	94%		79-125%
2037-26-5	Toluene-D8	93%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

U = Not detected LOD - Limit of Detection
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SP01
Lab Sample ID: FA11903-6L
Matrix: SO - Soil
Method: SW846 8270D SW846 3510C
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 87.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X032987.D	1	01/30/14	FS	01/29/14	OP50270	SX1556
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	LOQ	LOD	Units	Q
95-48-7	2-Methylphenol	0.010 U	D023	200	0.050	0.010	mg/l	
	3&4-Methylphenol	0.020 U	D024	200	0.050	0.020	mg/l	
87-86-5	Pentachlorophenol	0.10 U	D037	100	0.25	0.10	mg/l	
95-95-4	2,4,5-Trichlorophenol	0.020 U	D041	400	0.050	0.020	mg/l	
88-06-2	2,4,6-Trichlorophenol	0.020 U	D042	2.0	0.050	0.020	mg/l	
106-46-7	1,4-Dichlorobenzene	0.020 U	D027	7.5	0.050	0.020	mg/l	
121-14-2	2,4-Dinitrotoluene	0.010 U	D030	0.13	0.050	0.010	mg/l	
118-74-1	Hexachlorobenzene	0.010 U	D032	0.13	0.050	0.010	mg/l	
87-68-3	Hexachlorobutadiene	0.010 U	D033	0.50	0.050	0.010	mg/l	
67-72-1	Hexachloroethane	0.020 U	D034	3.0	0.050	0.020	mg/l	
98-95-3	Nitrobenzene	0.010 U	D036	2.0	0.050	0.010	mg/l	
110-86-1	Pyridine	0.040 U	D038	5.0	0.10	0.040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		14-67%
4165-62-2	Phenol-d5	31%		10-50%
118-79-6	2,4,6-Tribromophenol	64%		33-118%
4165-60-0	Nitrobenzene-d5	71%		42-108%
321-60-8	2-Fluorobiphenyl	70%		40-106%
1718-51-0	Terphenyl-d14	86%		39-121%

U = Not detected LOD - Limit of Detection
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SP01		
Lab Sample ID:	FA11903-6L	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8151A SW846 3510C	**Percent Solids:**	87.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CC043193.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	LOQ	LOD	Units	Q
94-75-7	2,4-D	0.050 U	D016	10	0.10	0.050	mg/l	
93-72-1	2,4,5-TP (Silvex)	0.0050 U	D017	1.0	0.010	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	104%		33-145%

U = Not detected LOD - Limit of Detection
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-UST-SP01		
Lab Sample ID:	FA11903-6L	**Date Sampled:**	01/22/14
Matrix:	SO - Soil	**Date Received:**	01/23/14
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	87.3
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK61299.D	1	01/30/14	EM	01/29/14	OP50271	GKK2054
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	LOQ	LOD	Units	Q
58-89-9	gamma-BHC (Lindane)	0.00010 U	D013	0.40	0.00050	0.00010	mg/l	
12789-03-6	Chlordane	0.0025 U	D020	0.030	0.0050	0.0025	mg/l	
72-20-8	Endrin	0.00020 U	D012	0.020	0.0010	0.00020	mg/l	
76-44-8	Heptachlor	0.00010 U	D031	0.0080	0.00050	0.00010	mg/l	
1024-57-3	Heptachlor epoxide	0.00010 U	D031	0.0080	0.00050	0.00010	mg/l	
72-43-5	Methoxychlor	0.00020 U	D014	10	0.0010	0.00020	mg/l	
8001-35-2	Toxaphene	0.013 U	D015	0.50	0.025	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		42-127%
2051-24-3	Decachlorobiphenyl	97%		27-127%

U = Not detected LOD - Limit of Detection
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-UST-SP01
Lab Sample ID: FA11903-6L
Matrix: SO - Soil
Project: WE03, Camp Lejuene, NC

Date Sampled: 01/22/14
Date Received: 01/23/14
Percent Solids: 87.3

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	LOQ	LOD	Units	DF	Prep	Analyzed	By	Method
Arsenic	0.050 U	D004	5.0	0.10	0.050	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]
Barium	0.24 J	D005	100	2.0	0.050	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]
Cadmium	0.010 U	D006	1.0	0.050	0.010	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]
Chromium	0.050 U	D007	5.0	0.10	0.050	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]
Lead	0.020 U	D008	5.0	0.050	0.020	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]
Mercury	0.0010 U	D009	0.20	0.0050	0.0010	mg/l	1	01/28/14	01/28/14	JL	SW846 7470A [1]
Selenium	0.050 U	D010	1.0	0.10	0.050	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]
Silver	0.020 U	D011	5.0	0.10	0.020	mg/l	1	01/29/14	01/29/14	LM	SW846 6010C [2]

(1) Instrument QC Batch: MA11358
(2) Instrument QC Batch: MA11364
(3) Prep QC Batch: MP26735
(4) Prep QC Batch: MP26742

LOQ = Limit of Quantitation LOD = Limit of Detection U = Indicates a result < LOD
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = LOD but < LOQ

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA11903 PAGE_____OF_____

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 7885 Van Karman Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabrina Shudeb E-mail:
Phone#: 949 859 5022
Sampler(s) Name(s) (Printed): John Graller

Project Information

Project Name: UST Demo Camp Lejeune
Street:
City: Jacksonville State: NC
Project #: 4659WE03
Fax #:
Client Purchase Order #: 1036773-20

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	Total # of Bottles	Container Information: Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	8260B WIPE + MTBE	8270B	MADEP VPH	MADEP EPH	8260B	TPH-GRO	SVOC	Herbicide + Pesticides	Metals + Hg	PCBs	TPH-DRO + RCRA	LAB USE ONLY
1	AS705-UST-SW11	1/22	0845	JG	SO	7		2						2	3	X	X	X	X								
2	AS705-UST-SW12	"	0830	"	"	7		2						2	3	X	X	X	X								
3	AS705-UST-SW13	"	0815	"	"	7		2						2	3	X	X	X	X								
4	AS705-UST-SW14	"	0915	"	"	21		6						6	9	X	X	X	X								MS/MSD
5	AS705-UST-SW11A	↓	0855	↓	↓	7		2						2	3	X	X	X	X								
6	AS705-UST-SP01	1/22	0925	JG	SO	6		4							2					X	X	X	X	X	X	X	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [X] 3 Day EMERGENCY — 3 DAY TAT
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Fed Ex # 8047 2600 5010

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 John G. Graller	1/22 1200	2 FX	3 FX 01-23-14	930	4
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 2-4

5.1 5

FA11903: Chain of Custody
Page 1 of 4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA11903 CLIENT: TetraTech PROJECT: UST Demo Completenne

DATE/TIME RECEIVED: 01-23-14 930 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8047 2600 5010

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM ____ 5-GRAM ____

NUMBER OF 5035 FIELD KITS ? 8

NUMBER OF LAB FILTERED METALS ? ____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.8
- [ ] CORRECTED TEMPS: 2.4

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: ____

TECHNICIAN SIGNATURE/DATE R Wilson 01-23-14 REVIEWER SIGNATURE/DATE 01/23/14

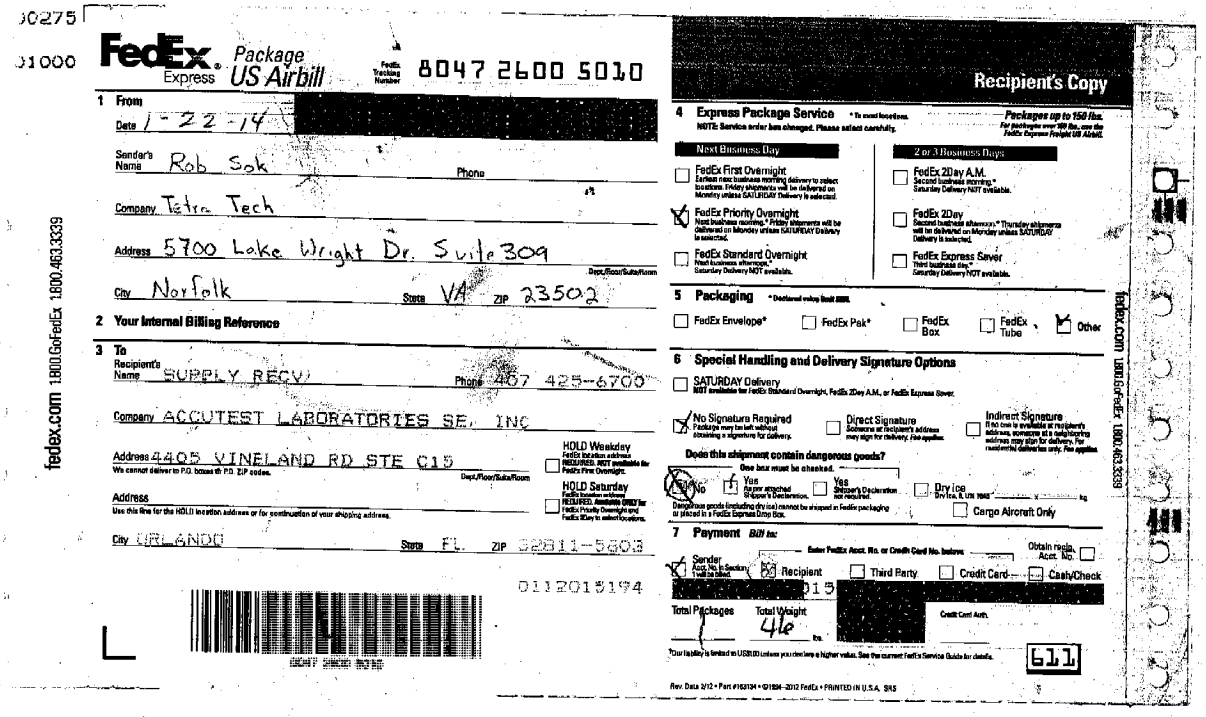
NF 12/10

receipt confirmation 122910.xls

5.1 5

FA11903: Chain of Custody

Page 2 of 4



30275
31000

FedEx Express Package US Airbill

FedEx Tracking Number 8047 2600 5010

Recipient's Copy

1 From
Date 1-22-14
Sender's Name Rob Sak Phone
Company Tetra Tech
Address 5700 Lake Wright Dr. Suite 309 Dept./Floor/Suite/Room
City Norfolk State VA ZIP 23502

2 Your Internal Billing Reference

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15 Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address
Use this line for the HOLD location address or for continuation of your shipping address.
City ORLANDO State FL ZIP 32811-5603
HOLD Weekday
HOLD Saturday
0112015194

4 Express Package Service
Packages up to 150 lbs.
Next Business Day
FedEx First Overnight
FedEx Priority Overnight
FedEx Standard Overnight
2 or 3 Business Days
FedEx 2Day A.M.
FedEx 2Day
FedEx Express Saver

5 Packaging
FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options
SATURDAY Delivery
No Signature Required
Direct Signature
Indirect Signature
Does this shipment contain dangerous goods?
No Yes Shipper's Declaration not required Dry Ice Cargo Aircraft Only

7 Payment Bill to:
Sender Recipient Third Party Credit Card Cash/Check
Total Packages Total Weight 416 lb.
Credit Card Auth.
611

fedex.com 1.800.GoFedEx 1.800.463.3339

Job Change Order: FA11903_1/23/2014

Requested Date:	1/23/2014	**Received Date:**	1/23/2014
Account Name:	Tetra Tech EC, Inc	**Due Date:**	1/28/2014
Project Description:	WE03, Camp Lejuene, NC	**Deliverable:**	COMMBN
CSR:	AC	**TAT (Days):**	7

Sample #:
FA11903-all

Change: Please change TAT on all samples to 5 working day.

Above Changes Sabina Sudoko **Date:** 1/23/2014

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

FA11903: Chain of Custody
Page 4 of 4

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2056-MB	F0063317.D	1	01/23/14	AD	n/a	n/a	VF2056

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethyl alcohol	ND	400	67	ug/kg	
75-85-4	Tert-Amyl Alcohol	ND	50	18	ug/kg	
75-65-0	Tert-Butyl Alcohol	ND	50	18	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	75-124%
2037-26-5	Toluene-D8	90%	75-126%
460-00-4	4-Bromofluorobenzene	114%	71-133%
17060-07-0	1,2-Dichloroethane-D4	95%	72-135%

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3177-MB	H0084019.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.1	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.9	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.1	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.4	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.0	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
64-17-5	Ethyl alcohol	ND	400	67	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3177-MB	H0084019.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
75-85-4	Tert-Amyl Alcohol	ND	50	18	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.0	ug/kg	
75-65-0	Tert-Butyl Alcohol	ND	50	18	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.2	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.2	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	8.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	
	m,p-Xylene	ND	10	1.6	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.1	ug/kg	

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3177-MB	H0084019.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	75-124%
2037-26-5	Toluene-D8	84%	75-126%
460-00-4	4-Bromofluorobenzene	82%	71-133%
17060-07-0	1,2-Dichloroethane-D4	87%	72-135%

Leachate Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50243-LB	J091573.D	10	01/28/14	DP	01/27/14	OP50243	VJ4579

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-6L

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	2.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.4	ug/l	
67-66-3	Chloroform	ND	10	3.1	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	2.4	ug/l	
106-46-7	p-Dichlorobenzene	ND	10	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	50	15	ug/l	
127-18-4	Tetrachloroethylene	ND	10	2.6	ug/l	
79-01-6	Trichloroethylene	3.9	10	3.0	ug/l	J
75-01-4	Vinyl chloride	ND	10	3.3	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2056-BS	F0063316.D	1	01/23/14	AD	n/a	n/a	VF2056

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
64-17-5	Ethyl alcohol	1000	955	96	53-154
75-85-4	Tert-Amyl Alcohol	500	478	96	69-130
75-65-0	Tert-Butyl Alcohol	500	478	96	58-136

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	75-124%
2037-26-5	Toluene-D8	101%	75-126%
460-00-4	4-Bromofluorobenzene	101%	71-133%
17060-07-0	1,2-Dichloroethane-D4	84%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4579-BS	J091574.D	10	01/28/14	DP	n/a	n/a	VJ4579

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-6L

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	250	242	97	81-122
108-90-7	Chlorobenzene	250	247	99	82-124
67-66-3	Chloroform	250	244	98	80-124
56-23-5	Carbon tetrachloride	250	258	103	76-136
75-35-4	1,1-Dichloroethylene	250	249	100	78-137
107-06-2	1,2-Dichloroethane	250	235	94	75-125
106-46-7	p-Dichlorobenzene	250	226	90	78-120
78-93-3	Methyl ethyl ketone	1250	836	67	56-143
127-18-4	Tetrachloroethylene	250	243	97	76-135
79-01-6	Trichloroethylene	250	251	100	81-126
75-01-4	Vinyl chloride	250	274	110	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	90%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	93%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3177-BS	H0084018.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	279	112	61-152
71-43-2	Benzene	50	52.8	106	76-126
108-86-1	Bromobenzene	50	53.1	106	76-122
74-97-5	Bromochloromethane	50	57.2	114	77-120
75-27-4	Bromodichloromethane	50	44.6	89	74-130
75-25-2	Bromoform	50	42.8	86	76-127
104-51-8	n-Butylbenzene	50	51.6	103	71-128
135-98-8	sec-Butylbenzene	50	53.8	108	79-135
98-06-6	tert-Butylbenzene	50	52.8	106	77-133
108-90-7	Chlorobenzene	50	52.1	104	81-129
75-00-3	Chloroethane	50	44.3	89	68-133
67-66-3	Chloroform	50	49.7	99	72-123
95-49-8	o-Chlorotoluene	50	52.7	105	77-129
106-43-4	p-Chlorotoluene	50	52.8	106	80-134
56-23-5	Carbon tetrachloride	50	50.9	102	78-133
75-34-3	1,1-Dichloroethane	50	50.7	101	73-125
75-35-4	1,1-Dichloroethylene	50	57.6	115	81-136
563-58-6	1,1-Dichloropropene	50	51.8	104	75-130
106-93-4	1,2-Dibromoethane	50	51.7	103	77-126
107-06-2	1,2-Dichloroethane	50	50.9	102	74-128
78-87-5	1,2-Dichloropropane	50	53.0	106	74-125
142-28-9	1,3-Dichloropropane	50	50.7	101	76-122
108-20-3	Di-Isopropyl ether	50	48.1	96	75-122
594-20-7	2,2-Dichloropropane	50	44.7	89	77-133
124-48-1	Dibromochloromethane	50	52.8	106	76-127
75-71-8	Dichlorodifluoromethane	50	43.5	87	68-168
156-59-2	cis-1,2-Dichloroethylene	50	50.4	101	74-126
10061-01-5	cis-1,3-Dichloropropene	50	43.7	87	80-123
541-73-1	m-Dichlorobenzene	50	51.8	104	81-129
95-50-1	o-Dichlorobenzene	50	51.6	103	80-129
106-46-7	p-Dichlorobenzene	50	50.5	101	76-130
156-60-5	trans-1,2-Dichloroethylene	50	55.2	110	70-127
10061-02-6	trans-1,3-Dichloropropene	50	44.5	89	75-131
64-17-5	Ethyl alcohol	1000	1080	108	53-154
100-41-4	Ethylbenzene	50	54.3	109	77-123
637-92-3	Ethyl tert-Butyl Ether	50	40.7	81	75-117

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3177-BS	H0084018.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
591-78-6	2-Hexanone	250	253	101	72-133
98-82-8	Isopropylbenzene	50	54.4	109	80-136
99-87-6	p-Isopropyltoluene	50	53.1	106	77-131
108-10-1	4-Methyl-2-pentanone	250	252	101	76-132
74-83-9	Methyl bromide	50	44.7	89	65-139
74-87-3	Methyl chloride	50	45.2	90	71-144
75-09-2	Methylene chloride	50	56.8	114	74-137
78-93-3	Methyl ethyl ketone	250	266	106	75-137
1634-04-4	Methyl Tert Butyl Ether	50	41.1	82	77-120
91-20-3	Naphthalene	50	52.0	104	79-129
103-65-1	n-Propylbenzene	50	54.8	110	80-135
100-42-5	Styrene	50	54.5	109	78-125
75-85-4	Tert-Amyl Alcohol	500	444	89	69-130
994-05-8	Tert-Amyl Methyl Ether	50	43.4	87	69-130
75-65-0	Tert-Butyl Alcohol	500	520	104	58-136
630-20-6	1,1,1,2-Tetrachloroethane	50	52.6	105	78-126
71-55-6	1,1,1-Trichloroethane	50	53.4	107	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	50.5	101	71-126
79-00-5	1,1,2-Trichloroethane	50	51.0	102	74-124
87-61-6	1,2,3-Trichlorobenzene	50	51.5	103	77-128
96-18-4	1,2,3-Trichloropropane	50	51.0	102	74-127
120-82-1	1,2,4-Trichlorobenzene	50	49.8	100	78-130
95-63-6	1,2,4-Trimethylbenzene	50	53.4	107	74-123
108-67-8	1,3,5-Trimethylbenzene	50	54.7	109	73-122
127-18-4	Tetrachloroethylene	50	51.3	103	79-130
108-88-3	Toluene	50	52.1	104	76-124
79-01-6	Trichloroethylene	50	52.1	104	75-128
75-69-4	Trichlorofluoromethane	50	44.8	90	73-145
75-01-4	Vinyl chloride	50	44.2	88	76-141
108-05-4	Vinyl Acetate	250	211	84	48-164
1330-20-7	Xylene (total)	150	169	113	80-129
	m,p-Xylene	100	115	115	80-128
95-47-6	o-Xylene	50	54.1	108	80-132

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3177-BS	H0084018.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	75-124%
2037-26-5	Toluene-D8	84%	75-126%
460-00-4	4-Bromofluorobenzene	86%	71-133%
17060-07-0	1,2-Dichloroethane-D4	85%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11811-1MS	F0063319.D	1	01/23/14	AD	n/a	n/a	VF2056
FA11811-1MSD	F0063320.D	1	01/23/14	AD	n/a	n/a	VF2056
FA11811-1	F0063318.D	1	01/23/14	AD	n/a	n/a	VF2056

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1

CAS No.	Compound	FA11811-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
64-17-5	Ethyl alcohol	360	U	1360	1210	89	1430	105	17	53-154/42
75-85-4	Tert-Amyl Alcohol	45	U	681	603	89	666	98	10	69-130/32
75-65-0	Tert-Butyl Alcohol	45	U	681	641	94	692	101	8	74-126/32

CAS No.	Surrogate Recoveries	MS	MSD	FA11811-1	Limits
1868-53-7	Dibromofluoromethane	102%	103%	100%	75-124%
2037-26-5	Toluene-D8	105%	108%	99%	75-126%
460-00-4	4-Bromofluorobenzene	189%*	194%*	119%	71-133%
17060-07-0	1,2-Dichloroethane-D4	88%	89%	96%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11858-1MS	J091585.D	10	01/28/14	DP	n/a	n/a	VJ4579
FA11858-1MSD	J091586.D	10	01/28/14	DP	n/a	n/a	VJ4579
FA11858-1	J091578.D	10	01/28/14	DP	01/27/14	OP50243	VJ4579

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-6L

CAS No.	Compound	FA11858-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10	U	250	254	102	249	100	2	81-122/14
108-90-7	Chlorobenzene	10	U	250	257	103	252	101	2	82-124/14
67-66-3	Chloroform	10	U	250	261	104	252	101	4	80-124/15
56-23-5	Carbon tetrachloride	10	U	250	259	104	256	102	1	76-136/23
75-35-4	1,1-Dichloroethylene	10	U	250	265	106	252	101	5	78-137/18
107-06-2	1,2-Dichloroethane	10	U	250	247	99	245	98	1	75-125/14
106-46-7	p-Dichlorobenzene	10	U	250	229	92	229	92	0	78-120/15
78-93-3	Methyl ethyl ketone	50	U	1250	927	74	947	76	2	56-143/18
127-18-4	Tetrachloroethylene	10	U	250	239	96	235	94	2	76-135/16
79-01-6	Trichloroethylene	10	U	250	253	101	246	98	3	81-126/15
75-01-4	Vinyl chloride	10	U	250	299	120	276	110	8	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA11858-1	Limits
1868-53-7	Dibromofluoromethane	97%	97%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	92%	92%	79-125%
2037-26-5	Toluene-D8	94%	95%	93%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	94%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11903-4MS	H0084026.D	1	01/28/14	EP	n/a	n/a	VH3177
FA11903-4MSD	H0084027.D	1	01/28/14	EP	n/a	n/a	VH3177
FA11903-4 [a]	H0084024.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	FA11903-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	580		344	333	-72*	307	-79*	8	61-152/27
71-43-2	Benzene	7.8	U	68.8	60.0	87	63.0	92	5	76-126/26
108-86-1	Bromobenzene	7.8	U	68.8	57.1	83	64.8	94	13	76-122/32
74-97-5	Bromochloromethane	7.8	U	68.8	68.9	100	70.9	103	3	77-120/24
75-27-4	Bromodichloromethane	7.8	U	68.8	52.8	77	54.7	80	4	74-130/25
75-25-2	Bromoform	7.8	U	68.8	52.4	76	51.6	75*	2	76-127/26
104-51-8	n-Butylbenzene	7.8	U	68.8	37.6	55*	53.2	77	34	71-128/35
135-98-8	sec-Butylbenzene	7.8	U	68.8	47.8	70*	64.7	94	30	79-135/34
98-06-6	tert-Butylbenzene	7.8	U	68.8	50.3	73*	64.8	94	25	77-133/34
108-90-7	Chlorobenzene	7.8	U	68.8	59.7	87	64.5	94	8	81-129/29
75-00-3	Chloroethane	7.8	U	68.8	55.4	81	57.1	83	3	68-133/29
67-66-3	Chloroform	7.8	U	68.8	58.6	85	60.9	89	4	72-123/26
95-49-8	o-Chlorotoluene	7.8	U	68.8	54.9	80	66.1	96	19	77-129/33
106-43-4	p-Chlorotoluene	7.8	U	68.8	56.1	82	67.1	98	18	80-134/33
56-23-5	Carbon tetrachloride	7.8	U	68.8	56.7	82	59.9	87	5	78-133/29
75-34-3	1,1-Dichloroethane	7.8	U	68.8	58.4	85	60.0	87	3	73-125/27
75-35-4	1,1-Dichloroethylene	7.8	U	68.8	65.6	95	67.9	99	3	81-136/28
563-58-6	1,1-Dichloropropene	7.8	U	68.8	58.0	84	61.8	90	6	75-130/28
106-93-4	1,2-Dibromoethane	7.8	U	68.8	63.1	92	63.8	93	1	77-126/26
107-06-2	1,2-Dichloroethane	7.8	U	68.8	62.4	91	64.2	93	3	74-128/23
78-87-5	1,2-Dichloropropane	7.8	U	68.8	60.6	88	63.4	92	5	74-125/25
142-28-9	1,3-Dichloropropane	7.8	U	68.8	62.7	91	63.4	92	1	76-122/26
108-20-3	Di-Isopropyl ether	7.8	U	68.8	54.8	80	57.2	83	4	75-122/25
594-20-7	2,2-Dichloropropane	7.8	U	68.8	49.3	72*	51.1	74*	4	77-133/28
124-48-1	Dibromochloromethane	7.8	U	68.8	64.8	94	66.7	97	3	76-127/27
75-71-8	Dichlorodifluoromethane	7.8	U	68.8	50.7	74	53.0	77	4	68-168/29
156-59-2	cis-1,2-Dichloroethylene	7.8	U	68.8	58.7	85	61.1	89	4	74-126/26
10061-01-5	cis-1,3-Dichloropropene	7.8	U	68.8	49.4	72*	50.0	73*	1	80-123/26
541-73-1	m-Dichlorobenzene	7.8	U	68.8	53.9	78*	64.0	93	17	81-129/33
95-50-1	o-Dichlorobenzene	7.8	U	68.8	54.5	79*	62.7	91	14	80-129/32
106-46-7	p-Dichlorobenzene	7.8	U	68.8	50.5	73*	58.0	84	14	76-130/32
156-60-5	trans-1,2-Dichloroethylene	7.8	U	68.8	61.7	90	63.1	92	2	70-127/27
10061-02-6	trans-1,3-Dichloropropene	7.8	U	68.8	55.2	80	55.4	81	0	75-131/28
64-17-5	Ethyl alcohol	630	U	1380	1250	91	2170	158*	54*	53-154/42
100-41-4	Ethylbenzene	7.8	U	68.8	57.5	84	62.7	91	9	77-123/31
637-92-3	Ethyl tert-Butyl Ether	7.8	U	68.8	47.2	69*	48.4	70*	3	75-117/24

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11903-4MS	H0084026.D	1	01/28/14	EP	n/a	n/a	VH3177
FA11903-4MSD	H0084027.D	1	01/28/14	EP	n/a	n/a	VH3177
FA11903-4 [a]	H0084024.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	FA11903-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	39	U	344	298	87	275	80	8	72-133/26
98-82-8	Isopropylbenzene	7.8	U	68.8	56.9	83	65.7	96	14	80-136/32
99-87-6	p-Isopropyltoluene	7.8	U	68.8	48.4	70*	64.1	93	28	77-131/34
108-10-1	4-Methyl-2-pentanone	39	U	344	308	90	295	86	4	76-132/26
74-83-9	Methyl bromide	7.8	U	68.8	54.0	79	55.2	80	2	65-139/31
74-87-3	Methyl chloride	7.8	U	68.8	54.8	80	57.1	83	4	71-144/27
75-09-2	Methylene chloride	16	U	68.8	66.3	96	67.9	99	2	74-137/28
78-93-3	Methyl ethyl ketone	39	U	344	328	95	299	87	9	75-137/25
1634-04-4	Methyl Tert Butyl Ether	7.8	U	68.8	52.4	76*	52.5	76*	0	77-120/24
91-20-3	Naphthalene	7.8	U	68.8	45.9	67*	42.3	62*	8	79-129/33
103-65-1	n-Propylbenzene	7.8	U	68.8	55.4	81	69.6	101	23	80-135/33
100-42-5	Styrene	7.8	U	68.8	56.6	82	59.8	87	5	78-125/30
75-85-4	Tert-Amyl Alcohol	78	U	688	551	80	650	95	16	69-130/32
994-05-8	Tert-Amyl Methyl Ether	7.8	U	68.8	52.9	77	53.1	77	0	69-130/23
75-65-0	Tert-Butyl Alcohol	78	U	688	670	97	786	114	16	74-126/32
630-20-6	1,1,1,2-Tetrachloroethane	7.8	U	68.8	61.6	90	66.1	96	7	78-126/27
71-55-6	1,1,1-Trichloroethane	7.8	U	68.8	59.6	87	62.8	91	5	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	7.8	U	68.8	61.5	89	66.3	96	8	71-126/30
79-00-5	1,1,2-Trichloroethane	7.8	U	68.8	59.7	87	63.4	92	6	74-124/28
87-61-6	1,2,3-Trichlorobenzene	7.8	U	68.8	38.1	55*	39.9	58*	5	77-128/35
96-18-4	1,2,3-Trichloropropane	7.8	U	68.8	63.9	93	65.8	96	3	74-127/27
120-82-1	1,2,4-Trichlorobenzene	7.8	U	68.8	38.5	56*	43.8	64*	13	78-130/34
95-63-6	1,2,4-Trimethylbenzene	7.8	U	68.8	51.7	75	64.2	93	22	74-123/34
108-67-8	1,3,5-Trimethylbenzene	7.8	U	68.8	50.5	73	63.3	92	22	73-122/33
127-18-4	Tetrachloroethylene	7.8	U	68.8	56.1	82	62.1	90	10	79-130/31
108-88-3	Toluene	7.8	U	68.8	57.9	84	63.2	92	9	76-124/30
79-01-6	Trichloroethylene	7.8	U	68.8	58.2	85	62.0	90	6	75-128/27
75-69-4	Trichlorofluoromethane	7.8	U	68.8	54.1	79	56.0	81	3	73-145/31
75-01-4	Vinyl chloride	7.8	U	68.8	56.0	81	56.6	82	1	76-141/27
108-05-4	Vinyl Acetate	39	U	344	83.4	24*	42.9	12*	64*	48-164/37
1330-20-7	Xylene (total)	23	U	206	185	90	207	100	11	80-129/30
	m,p-Xylene	16	U	138	125	91	138	100	10	80-128/30
95-47-6	o-Xylene	7.8	U	68.8	60.5	88	68.7	100	13	80-132/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11903-4MS	H0084026.D	1	01/28/14	EP	n/a	n/a	VH3177
FA11903-4MSD	H0084027.D	1	01/28/14	EP	n/a	n/a	VH3177
FA11903-4 [a]	H0084024.D	1	01/28/14	EP	n/a	n/a	VH3177

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-4	Limits
1868-53-7	Dibromofluoromethane	94%	92%	94%	75-124%
2037-26-5	Toluene-D8	82%	84%	84%	75-126%
460-00-4	4-Bromofluorobenzene	85%	89%	88%	71-133%
17060-07-0	1,2-Dichloroethane-D4	86%	82%	86%	72-135%

(a) Sample was prepared from a bulk container.

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11815-1LDUP	J091577.D	10	01/28/14	DP	n/a	n/a	VJ4579
FA11815-1L	J091576.D	10	01/28/14	DP	01/27/14	OP50243	VJ4579

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA11903-6L

CAS No.	Compound	FA11815-1L ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	10 U		ND		nc	14
108-90-7	Chlorobenzene	10 U		ND		nc	14
67-66-3	Chloroform	10 U		ND		nc	15
56-23-5	Carbon tetrachloride	10 U		ND		nc	23
75-35-4	1,1-Dichloroethylene	10 U		ND		nc	18
107-06-2	1,2-Dichloroethane	10 U		ND		nc	14
106-46-7	p-Dichlorobenzene	10 U		ND		nc	15
78-93-3	Methyl ethyl ketone	50 U		ND		nc	18
127-18-4	Tetrachloroethylene	10 U		ND		nc	16
79-01-6	Trichloroethylene	10 U		ND		nc	15
75-01-4	Vinyl chloride	10 U		ND		nc	18

CAS No.	Surrogate Recoveries	DUP	FA11815-1L	Limits
1868-53-7	Dibromofluoromethane	100%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	94%	79-125%
2037-26-5	Toluene-D8	94%	94%	85-112%
460-00-4	4-Bromofluorobenzene	95%	93%	83-118%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-MB	U043193.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
95-57-8	2-Chlorophenol	ND	170	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	17	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	17	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	18	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	17	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	17	ug/kg	
100-02-7	4-Nitrophenol	ND	830	130	ug/kg	
87-86-5	Pentachlorophenol	ND	830	130	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	17	ug/kg	
83-32-9	Acenaphthene	ND	170	21	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	ug/kg	
106-47-8	4-Chloroaniline	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	17	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	17	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-MB	U043193.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Result	RL	MDL	Units	Q
91-94-1	3,3'-Dichlorobenzidine	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	17	ug/kg	
67-72-1	Hexachloroethane	ND	170	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	97%	40-102%
4165-62-2	Phenol-d5	97%	41-100%
118-79-6	2,4,6-Tribromophenol	93%	42-108%
4165-60-0	Nitrobenzene-d5	87%	40-105%
321-60-8	2-Fluorobiphenyl	90%	43-107%
1718-51-0	Terphenyl-d14	120%* [a]	45-119%

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-MB	U043193.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:**

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

(a) Outside control limits.

Leachate Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50270-LB	X032986.D	1	01/30/14	FS	01/29/14	OP50270	SX1556

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-6L

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	50	5.0	ug/l	
	3&4-Methylphenol	ND	50	12	ug/l	
87-86-5	Pentachlorophenol	ND	250	50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	50	9.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	50	5.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	50	5.7	ug/l	
118-74-1	Hexachlorobenzene	ND	50	6.6	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	5.0	ug/l	
67-72-1	Hexachloroethane	ND	50	5.0	ug/l	
98-95-3	Nitrobenzene	ND	50	5.0	ug/l	
110-86-1	Pyridine	ND	100	20	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	39%	14-67%
4165-62-2	Phenol-d5	25%	10-50%
118-79-6	2,4,6-Tribromophenol	66%	33-118%
4165-60-0	Nitrobenzene-d5	71%	42-108%
321-60-8	2-Fluorobiphenyl	72%	40-106%
1718-51-0	Terphenyl-d14	90%	39-121%

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-BS	U043192.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2480	74	36-118
95-57-8	2-Chlorophenol	1670	1240	74	48-104
59-50-7	4-Chloro-3-methyl phenol	1670	1230	74	52-108
120-83-2	2,4-Dichlorophenol	1670	1170	70	51-105
105-67-9	2,4-Dimethylphenol	1670	1160	70	43-96
51-28-5	2,4-Dinitrophenol	3330	3200	96	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3220	97	64-121
95-48-7	2-Methylphenol	1670	1350	81	46-107
	3&4-Methylphenol	3330	2870	86	44-111
88-75-5	2-Nitrophenol	1670	1170	70	49-104
100-02-7	4-Nitrophenol	3330	3030	91	56-116
87-86-5	Pentachlorophenol	3330	3320	100	61-114
108-95-2	Phenol	1670	1370	82	45-110
88-06-2	2,4,6-Trichlorophenol	1670	1400	84	56-109
83-32-9	Acenaphthene	1670	1410	85	56-109
208-96-8	Acenaphthylene	1670	1420	85	56-106
120-12-7	Anthracene	1670	1460	88	61-110
56-55-3	Benzo(a)anthracene	1670	1490	89	66-111
50-32-8	Benzo(a)pyrene	1670	1420	85	59-104
205-99-2	Benzo(b)fluoranthene	1670	1520	91	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1550	93	67-113
207-08-9	Benzo(k)fluoranthene	1670	1510	91	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1210	73	62-110
85-68-7	Butyl benzyl phthalate	1670	1600	96	65-113
100-51-6	Benzyl Alcohol	1670	1430	86	53-108
91-58-7	2-Chloronaphthalene	1670	1310	79	53-106
106-47-8	4-Chloroaniline	1670	792	48	30-115
218-01-9	Chrysene	1670	1550	93	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1210	73	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1250	75	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1360	82	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1350	81	58-106
95-50-1	1,2-Dichlorobenzene	1670	1170	70	44-102
122-66-7	1,2-Diphenylhydrazine	1670	1460	88	58-112
541-73-1	1,3-Dichlorobenzene	1670	1160	70	42-100
106-46-7	1,4-Dichlorobenzene	1670	1270	76	40-106

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-BS	U043192.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	1670	1510	91	68-115
132-64-9	Dibenzofuran	1670	1440	86	57-108
84-74-2	Di-n-butyl phthalate	1670	1500	90	63-108
117-84-0	Di-n-octyl phthalate	1670	1560	94	64-119
84-66-2	Diethyl phthalate	1670	1460	88	61-109
131-11-3	Dimethyl phthalate	1670	1360	82	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1590	95	64-115
206-44-0	Fluoranthene	1670	1480	89	60-108
86-73-7	Fluorene	1670	1450	87	58-109
118-74-1	Hexachlorobenzene	1670	1420	85	59-111
87-68-3	Hexachlorobutadiene	1670	1140	68	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1180	71	49-110
67-72-1	Hexachloroethane	1670	1220	73	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1410	85	66-116
78-59-1	Isophorone	1670	1200	72	42-89
90-12-0	1-Methylnaphthalene	1670	1160	70	49-106
91-57-6	2-Methylnaphthalene	1670	1240	74	47-106
91-20-3	Naphthalene	1670	1200	72	44-104
98-95-3	Nitrobenzene	1670	1110	67	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1350	81	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1460	88	62-110
85-01-8	Phenanthrene	1670	1520	91	63-111
129-00-0	Pyrene	1670	1570	94	65-115
120-82-1	1,2,4-Trichlorobenzene	1670	1080	65	45-100

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	83%	40-102%
4165-62-2	Phenol-d5	86%	41-100%
118-79-6	2,4,6-Tribromophenol	91%	42-108%
4165-60-0	Nitrobenzene-d5	70%	40-105%
321-60-8	2-Fluorobiphenyl	81%	43-107%
1718-51-0	Terphenyl-d14	110%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50270-LBS	X032985.D	1	01/30/14	FS	01/29/14	OP50270	SX1556

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-6L

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	500	307	61	43-90
	3&4-Methylphenol	1000	558	56	36-88
87-86-5	Pentachlorophenol	1000	724	72	61-115
95-95-4	2,4,5-Trichlorophenol	500	410	82	62-109
88-06-2	2,4,6-Trichlorophenol	500	425	85	59-107
106-46-7	1,4-Dichlorobenzene	500	376	75	45-98
121-14-2	2,4-Dinitrotoluene	500	381	76	61-110
118-74-1	Hexachlorobenzene	500	400	80	63-108
87-68-3	Hexachlorobutadiene	500	424	85	42-102
67-72-1	Hexachloroethane	500	375	75	42-100
98-95-3	Nitrobenzene	500	395	79	50-104
110-86-1	Pyridine	500	226	45	23-74

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	48%	14-67%
4165-62-2	Phenol-d5	30%	10-50%
118-79-6	2,4,6-Tribromophenol	74%	33-118%
4165-60-0	Nitrobenzene-d5	84%	42-108%
321-60-8	2-Fluorobiphenyl	87%	40-106%
1718-51-0	Terphenyl-d14	97%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-MS	U043198.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
OP50214-MSD	U043199.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
FA11903-4	U043197.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	FA11903-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	910 U		3670	1780	49	1810	50	2	36-118/41
95-57-8	2-Chlorophenol	180 U		1830	1350	74	1410	77	4	48-104/26
59-50-7	4-Chloro-3-methyl phenol	180 U		1830	1380	75	1460	80	6	52-108/21
120-83-2	2,4-Dichlorophenol	180 U		1830	1310	71	1370	75	4	51-105/27
105-67-9	2,4-Dimethylphenol	180 U		1830	1330	73	1400	77	5	43-96/23
51-28-5	2,4-Dinitrophenol	910 U		3670	3100	85	3160	86	2	40-119/32
534-52-1	4,6-Dinitro-o-cresol	360 U		3670	3240	88	3500	96	8	64-121/29
95-48-7	2-Methylphenol	180 U		1830	1430	78	1510	83	5	46-107/24
	3&4-Methylphenol	180 U		3670	3130	85	3260	89	4	44-111/24
88-75-5	2-Nitrophenol	180 U		1830	1330	73	1350	74	1	49-104/27
100-02-7	4-Nitrophenol	910 U		3670	3410	93	3690	101	8	56-116/23
87-86-5	Pentachlorophenol	910 U		3670	3500	95	3780	103	8	61-114/23
108-95-2	Phenol	180 U		1830	1470	80	1550	85	5	45-110/24
88-06-2	2,4,6-Trichlorophenol	180 U		1830	1570	86	1680	92	7	56-109/25
83-32-9	Acenaphthene	180 U		1830	1560	85	1690	92	8	56-109/23
208-96-8	Acenaphthylene	180 U		1830	1580	86	1690	92	7	56-106/23
120-12-7	Anthracene	180 U		1830	1620	88	1730	95	7	61-110/21
56-55-3	Benzo(a)anthracene	180 U		1830	1650	90	1780	97	8	66-111/23
50-32-8	Benzo(a)pyrene	180 U		1830	1590	87	1700	93	7	59-104/23
205-99-2	Benzo(b)fluoranthene	180 U		1830	1690	92	1760	96	4	67-113/24
191-24-2	Benzo(g,h,i)perylene	180 U		1830	1680	92	1840	101	9	67-113/21
207-08-9	Benzo(k)fluoranthene	180 U		1830	1690	92	1880	103	11	67-114/22
101-55-3	4-Bromophenyl phenyl ether	180 U		1830	1300	71	1420	78	9	62-110/21
85-68-7	Butyl benzyl phthalate	180 U		1830	1780	97	1910	105	7	65-113/20
100-51-6	Benzyl Alcohol	180 U		1830	1550	85	1640	90	6	53-108/24
91-58-7	2-Chloronaphthalene	180 U		1830	1480	81	1560	85	5	53-106/23
106-47-8	4-Chloroaniline	180 U		1830	941	51	971	53	3	30-115/30
218-01-9	Chrysene	180 U		1830	1720	94	1810	99	5	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	180 U		1830	1320	72	1410	77	7	48-105/24
111-44-4	bis(2-Chloroethyl)ether	180 U		1830	1390	76	1430	78	3	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	180 U		1830	1470	80	1510	83	3	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	180 U		1830	1500	82	1610	88	7	58-106/21
95-50-1	1,2-Dichlorobenzene	180 U		1830	1300	71	1330	73	2	44-102/28
122-66-7	1,2-Diphenylhydrazine	180 U		1830	1550	85	1630	89	5	58-112/22
541-73-1	1,3-Dichlorobenzene	180 U		1830	1300	71	1310	72	1	42-100/30
106-46-7	1,4-Dichlorobenzene	180 U		1830	1400	76	1410	77	1	40-106/29

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50214-MS	U043198.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
OP50214-MSD	U043199.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004
FA11903-4	U043197.D	1	01/24/14	NAF	01/23/14	OP50214	SU2004

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	FA11903-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
53-70-3	Dibenzo(a,h)anthracene	180	U	1830	1640	89	1800	98	9	68-115/23
132-64-9	Dibenzofuran	180	U	1830	1620	88	1740	95	7	57-108/22
84-74-2	Di-n-butyl phthalate	360	U	1830	1660	91	1790	98	8	63-108/19
117-84-0	Di-n-octyl phthalate	180	U	1830	1740	95	1860	102	7	64-119/21
84-66-2	Diethyl phthalate	360	U	1830	1660	91	1790	98	8	61-109/20
131-11-3	Dimethyl phthalate	180	U	1830	1520	83	1670	91	9	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	360	U	1830	1700	93	1840	101	8	64-115/23
206-44-0	Fluoranthene	180	U	1830	1700	93	1810	99	6	60-108/25
86-73-7	Fluorene	180	U	1830	1660	91	1760	96	6	58-109/21
118-74-1	Hexachlorobenzene	180	U	1830	1550	85	1660	91	7	59-111/21
87-68-3	Hexachlorobutadiene	180	U	1830	1300	71	1320	72	2	41-108/27
77-47-4	Hexachlorocyclopentadiene	180	U	1830	1170	64	1210	66	3	49-110/31
67-72-1	Hexachloroethane	180	U	1830	1380	75	1370	75	1	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	180	U	1830	1560	85	1690	92	8	66-116/22
78-59-1	Isophorone	180	U	1830	1340	73	1380	76	3	42-89/22
90-12-0	1-Methylnaphthalene	180	U	1830	1270	69	1330	73	5	49-106/26
91-57-6	2-Methylnaphthalene	180	U	1830	1360	74	1430	78	5	47-106/27
91-20-3	Naphthalene	180	U	1830	1350	74	1380	76	2	44-104/27
98-95-3	Nitrobenzene	180	U	1830	1260	69	1310	72	4	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	180	U	1830	1450	79	1520	83	5	48-108/27
86-30-6	N-Nitrosodiphenylamine	180	U	1830	1560	85	1690	92	8	62-110/21
85-01-8	Phenanthrene	180	U	1830	1650	90	1770	97	7	63-111/22
129-00-0	Pyrene	180	U	1830	1740	95	1840	101	6	65-115/25
120-82-1	1,2,4-Trichlorobenzene	180	U	1830	1220	67	1250	68	2	45-100/26

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-4	Limits
367-12-4	2-Fluorophenol	84%	92%	87%	40-102%
4165-62-2	Phenol-d5	84%	92%	87%	41-100%
118-79-6	2,4,6-Tribromophenol	88%	100%	85%	42-108%
4165-60-0	Nitrobenzene-d5	74%	79%	79%	40-105%
321-60-8	2-Fluorobiphenyl	82%	91%	80%	43-107%
1718-51-0	Terphenyl-d14	109%	118%	109%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50270-MS	X032988.D	1	01/30/14	FS	01/29/14	OP50270	SX1556
OP50270-MSD	X032989.D	1	01/30/14	FS	01/29/14	OP50270	SX1556
FA11903-6L	X032987.D	1	01/30/14	FS	01/29/14	OP50270	SX1556

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA11903-6L

CAS No.	Compound	FA11903-6L ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	50 U		500	246	49	286	57	15	43-90/28
	3&4-Methylphenol	50 U		1000	459	46	525	53	13	36-88/28
87-86-5	Pentachlorophenol	250 U		1000	669	67	776	78	15	61-115/26
95-95-4	2,4,5-Trichlorophenol	50 U		500	359	72	415	83	14	62-109/22
88-06-2	2,4,6-Trichlorophenol	50 U		500	369	74	420	84	13	59-107/23
106-46-7	1,4-Dichlorobenzene	50 U		500	308	62	364	73	17	45-98/25
121-14-2	2,4-Dinitrotoluene	50 U		500	337	67	380	76	12	61-110/21
118-74-1	Hexachlorobenzene	50 U		500	350	70	401	80	14	63-108/22
87-68-3	Hexachlorobutadiene	50 U		500	353	71	425	85	19	42-102/28
67-72-1	Hexachloroethane	50 U		500	300	60	356	71	17	42-100/29
98-95-3	Nitrobenzene	50 U		500	325	65	375	75	14	50-104/28
110-86-1	Pyridine	100 U		500	181	36	215	43	17	23-74/34

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-6L	Limits
367-12-4	2-Fluorophenol	37%	44%	44%	14-67%
4165-62-2	Phenol-d5	23%	28%	31%	10-50%
118-79-6	2,4,6-Tribromophenol	65%	74%	64%	33-118%
4165-60-0	Nitrobenzene-d5	68%	79%	71%	42-108%
321-60-8	2-Fluorobiphenyl	73%	85%	70%	40-106%
1718-51-0	Terphenyl-d14	84%	97%	86%	39-121%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUU313-MB	UU006459.D	1	01/29/14	AH	n/a	n/a	GUU313

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	5100	1800	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5100	1800	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5100	1800	ug/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	BFB	91%	70-130%
460-00-4	BFB	77%	70-130%

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3319-MB	UV062183.D	1	01/24/14	MM	n/a	n/a	GUV3319

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11903-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	105%	56-149%
98-08-8	aaa-Trifluorotoluene	105%	66-132%

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3319-BS	UV062182.D	1	01/24/14	MM	n/a	n/a	GUV3319

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11903-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.8	99	74-128

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	103%	56-149%
98-08-8	aaa-Trifluorotoluene	102%	66-132%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUU313-BS	UU006456.D	1	01/29/14	AH	n/a	n/a	GUU313
GUU313-BSD	UU006458.D	1	01/29/14	AH	n/a	n/a	GUU313

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	C5- C8 Aliphatics (Unadj.)	12500	13700	110	14800	119	8	70-130/25
	C9- C12 Aliphatics (Unadj.)	8320	9190	110	10200	123	10	70-130/25
	C9- C10 Aromatics (Unadj.)	4160	4400	106	4200	101	5	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	BFB	99%	90%	70-130%
460-00-4	BFB	84%	77%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11903-6MS	UV062186.D	1	01/24/14	MM	n/a	n/a	GUV3319
FA11903-6MSD	UV062187.D	1	01/24/14	MM	n/a	n/a	GUV3319
FA11903-6	UV062185.D	1	01/24/14	MM	n/a	n/a	GUV3319

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11903-6

CAS No.	Compound	FA11903-6 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	2.7	U	10.9	11.1	102	11.2	103	1	74-128/17

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-6	Limits
460-00-4	4-Bromofluorobenzene	101%	102%	105%	56-149%
98-08-8	aaa-Trifluorotoluene	102%	102%	103%	66-132%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA11903-4DUP	UU006476.D	1	01/30/14	AH	n/a	n/a	GUU313
FA11903-4	UU006474.D	1	01/30/14	AH	n/a	n/a	GUU313

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	FA11903-4 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
	C5- C8 Aliphatics (Unadj.)	8500	U	ND		nc	50
	C9- C12 Aliphatics (Unadj.)	8500	U	ND		nc	50
	C9- C10 Aromatics (Unadj.)	8500	U	ND		nc	50

CAS No.	Surrogate Recoveries	DUP	FA11903-4	Limits
460-00-4	BFB	97%	104%	70-130%
460-00-4	BFB	82%	88%	70-130%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50239-MB	NN007495.D	1	01/29/14	NAF	01/27/14	OP50239	GNN325

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	10000	7500	ug/kg	
	C9-C18 Aliphatics	ND	10000	5000	ug/kg	
	C19-C36 Aliphatics	ND	10000	5000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	72%	40-140%
580-13-2	2-Bromonaphthalene	76%	40-140%
84-15-1	o-Terphenyl	60%	40-140%
321-60-8	2-Fluorobiphenyl	76%	40-140%

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50229-MB	MM09509.D	1	01/27/14	MV	01/24/14	OP50229	GMM210

The QC reported here applies to the following samples: **Method:** SW846 8082A

FA11903-6

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	17	8.3	ug/kg	
11141-16-5	Aroclor 1232	ND	17	8.3	ug/kg	
53469-21-9	Aroclor 1242	ND	17	6.7	ug/kg	
12672-29-6	Aroclor 1248	ND	17	6.7	ug/kg	
11097-69-1	Aroclor 1254	ND	17	6.7	ug/kg	
11096-82-5	Aroclor 1260	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	95%	44-126%
2051-24-3	Decachlorobiphenyl	96%	41-145%

Method Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50225-MB	JJ001458.D	1	01/27/14	SJL	01/24/14	OP50225	GJJ52

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11903-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	4.2	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	92%	56-122%

Leachate Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50262-LB	CC043180.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630

The QC reported here applies to the following samples: **Method:** SW846 8151A

FA11903-6L

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	100	18	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	10	3.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	93%	33-145%

Leachate Blank Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50271-LB	KK61298.D	1	01/30/14	EM	01/29/14	OP50271	GKK2054

The QC reported here applies to the following samples: **Method:** SW846 8081B

FA11903-6L

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.50	0.050	ug/l	
12789-03-6	Chlordane	ND	5.0	2.0	ug/l	
72-20-8	Endrin	ND	1.0	0.10	ug/l	
76-44-8	Heptachlor	ND	0.50	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.50	0.050	ug/l	
72-43-5	Methoxychlor	ND	1.0	0.10	ug/l	
8001-35-2	Toxaphene	ND	25	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	109%	42-127%
2051-24-3	Decachlorobiphenyl	105%	27-127%

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50262-LBS	CC043179.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630

The QC reported here applies to the following samples: **Method:** SW846 8151A

FA11903-6L

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	500	477	95	69-138
93-72-1	2,4,5-TP (Silvex)	50	51.6	103	76-142

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	88%	33-145%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50271-LBS	KK61297.D	1	01/30/14	EM	01/29/14	OP50271	GKK2054

The QC reported here applies to the following samples: **Method:** SW846 8081B

FA11903-6L

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
58-89-9	gamma-BHC (Lindane)	5	5.5	110	68-132
72-20-8	Endrin	5	5.8	116	71-147
76-44-8	Heptachlor	5	5.5	110	63-130
1024-57-3	Heptachlor epoxide	5	5.9	118	67-129
72-43-5	Methoxychlor	5	6.7	134	60-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	107%	42-127%
2051-24-3	Decachlorobiphenyl	109%	27-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50229-BS	MM09508.D	1	01/27/14	MV	01/24/14	OP50229	GMM210

The QC reported here applies to the following samples: **Method:** SW846 8082A

FA11903-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	139	104	58-126
11096-82-5	Aroclor 1260	133	134	101	59-133

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	108%	44-126%
2051-24-3	Decachlorobiphenyl	95%	41-145%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50225-BS	JJ001457.D	1	01/27/14	SJL	01/24/14	OP50225	GJJ52

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11903-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	33.3	26.6	80	62-116

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	56-122%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50239-BS	NN007493.D	1	01/29/14	NAF	01/27/14	OP50239	GNN325
OP50239-BSD	NN007494.D	1	01/29/14	NAF	01/27/14	OP50239	GNN325

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj.)	85000	53700	63	58400	69	8	40-140/30
	C9-C18 Aliphatics	30000	12500	42	13000	43	4	40-140/30
	C19-C36 Aliphatics	40000	28200	71	29500	74	5	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	66%	70%	40-140%
580-13-2	2-Bromonaphthalene	75%	80%	40-140%
84-15-1	o-Terphenyl	54%	59%	40-140%
321-60-8	2-Fluorobiphenyl	68%	74%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP50239-BS	2-Methylnaphthalene	1720	ND	0.0%	5.0
OP50239-BS	Naphthalene	1550	ND	0.0%	5.0
OP50239-BSD	2-Methylnaphthalene	1790	ND	0.0%	5.0
OP50239-BSD	Naphthalene	1600	ND	0.0%	5.0

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50262-MS	CC043194.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630
OP50262-MSD	CC043195.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630
FA11903-6L	CC043193.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630

The QC reported here applies to the following samples: **Method:** SW846 8151A

FA11903-6L

CAS No.	Compound	FA11903-6L ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	100	U	500	567	113	585	117	3	69-138/21
93-72-1	2,4,5-TP (Silvex)	10	U	50	56.5	113	56.3	113	0	76-142/27

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-6L	Limits
19719-28-9	2,4-DCAA	108%	106%	104%	33-145%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50271-MS	KK61300.D	1	01/30/14	EM	01/29/14	OP50271	GKK2054
OP50271-MSD	KK61301.D	1	01/30/14	EM	01/29/14	OP50271	GKK2054
FA11903-6L	KK61299.D	1	01/30/14	EM	01/29/14	OP50271	GKK2054

The QC reported here applies to the following samples: **Method:** SW846 8081B

FA11903-6L

CAS No.	Compound	FA11903-6L ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
58-89-9	gamma-BHC (Lindane)	0.50	U	5	5.4	108	5.3	106	2	68-132/22
72-20-8	Endrin	1.0	U	5	5.8	116	5.8	116	0	71-147/23
76-44-8	Heptachlor	0.50	U	5	5.5	110	5.4	108	2	63-130/23
1024-57-3	Heptachlor epoxide	0.50	U	5	6.0	120	6.0	120	0	67-129/23
72-43-5	Methoxychlor	1.0	U	5	6.6	132	6.8	136	3	60-136/25

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-6L	Limits
877-09-8	Tetrachloro-m-xylene	112%	104%	106%	42-127%
2051-24-3	Decachlorobiphenyl	109%	101%	97%	27-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50229-MS	MM09511.D	1	01/27/14	MV	01/24/14	OP50229	GMM210
OP50229-MSD	MM09512.D	1	01/27/14	MV	01/24/14	OP50229	GMM210
FA11903-6	MM09510.D	1	01/27/14	MV	01/24/14	OP50229	GMM210

The QC reported here applies to the following samples: **Method:** SW846 8082A

FA11903-6

CAS No.	Compound	FA11903-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	19	U	152	136	90	176	116	26*	58-126/25
11096-82-5	Aroclor 1260	19	U	152	143	94	153	101	7	59-133/31

CAS No.	Surrogate Recoveries	MS	MSD	FA11903-6	Limits
877-09-8	Tetrachloro-m-xylene	80%	97%	86%	44-126%
2051-24-3	Decachlorobiphenyl	87%	92%	85%	41-145%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50225-MS	JJ001460.D	1	01/27/14	SJL	01/24/14	OP50225	GJJ52
OP50225-MSD	JJ001461.D	1	01/27/14	SJL	01/24/14	OP50225	GJJ52
FA11877-8	JJ001459.D	1	01/27/14	SJL	01/24/14	OP50225	GJJ52

The QC reported here applies to the following samples: **Method:** SW846 8015C

FA11903-6

CAS No.	Compound	FA11877-8 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	21.4		47.8	69.8	101	74.9	111	7	62-116/35

CAS No.	Surrogate Recoveries	MS	MSD	FA11877-8	Limits
84-15-1	o-Terphenyl	87%	91%	85%	56-122%

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50262-LS	CC043182.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630
FA11820-2L	CC043181.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630

The QC reported here applies to the following samples: **Method:** SW846 8151A

FA11903-6L

CAS No.	Compound	FA11820-2L ug/l	Q	Spike ug/l	LS ug/l	LS %	Limits
94-75-7	2,4-D	100 U		500	496	99	69-138
93-72-1	2,4,5-TP (Silvex)	10 U		50	52.0	104	76-142

CAS No.	Surrogate Recoveries	LS	FA11820-2L Limits	
19719-28-9	2,4-DCAA	85%	65%	33-145%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50262-DUP	CC043188.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630
FA11820-7L	CC043187.D	1	01/29/14	NJ	01/28/14	OP50262	GCC630

The QC reported here applies to the following samples: **Method:** SW846 8151A

FA11903-6L

CAS No.	Compound	FA11820-7L ug/l	Q	DUP ug/l	Q	RPD	Limits
94-75-7	2,4-D	100 U		ND		nc	21
93-72-1	2,4,5-TP (Silvex)	10 U		ND		nc	27

CAS No.	Surrogate Recoveries	DUP	FA11820-7L	Limits
19719-28-9	2,4-DCAA	104%	107%	33-145%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA11903
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50239-DUP	NN007503.D	1	01/30/14	NAF	01/27/14	OP50239	GNN325
FA11903-4	NN007502.D	1	01/30/14	NAF	01/27/14	OP50239	GNN325

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5

CAS No.	Compound	FA11903-4 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
	C11-C22 Aromatics (Unadj.)	11000	U	ND		nc	30 [a]
	C9-C18 Aliphatics	11000	U	ND		nc	30 [a]
	C19-C36 Aliphatics	11000	U	ND		nc	30 [a]

CAS No.	Surrogate Recoveries	DUP	FA11903-4	Limits
3386-33-2	1-Chlorooctadecane	70%	80%	40-140%
580-13-2	2-Bromonaphthalene	83%	80%	40-140%
84-15-1	o-Terphenyl	62%	66%	40-140%
321-60-8	2-Fluorobiphenyl	78%	79%	40-140%

(a) Advisory control limits.

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26735 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date:				01/28/14		01/28/14	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Mercury	0.00050	.00003	.00005	0.0000085	<0.00050	-0.000018	<0.0050

Associated samples MP26735: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26735 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 01/28/14

Metal	FA11987-1L Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.029	0.030	96.7	80-120

Associated samples MP26735: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26735
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date:					01/28/14				01/28/14	
Metal	FA11987-1L Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit	FA11903-6L Original	DUP	RPD	QC Limits
Mercury	0.0	0.027	0.030	90.0	7.1	20	0.0	0.0	NC	0-20

Associated samples MP26735: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26735
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date:			01/28/14				01/28/14	
Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0028	0.0030	93.3	80-120	0.028	0.030	93.3	80-120

Associated samples MP26735: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26735
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/28/14

Metal	FA11987-1L Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26735: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26742
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date:				01/29/14		01/29/14	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	0.20	.015	.015				
Antimony	0.0060	.002	.0023				
Arsenic	0.010	.002	.0024	-0.0010	<0.010	-0.0080	<0.10
Barium	0.20	.001	.005	0.0	<0.20	0.0060	<2.0
Beryllium	0.0040	.0005	.0005				
Cadmium	0.0050	.0005	.0005	-0.00010	<0.0050	0.0	<0.050
Calcium	1.0	.05	.05				
Chromium	0.010	.001	.002	0.00070	<0.010	-0.0040	<0.10
Cobalt	0.050	.0005	.0005				
Copper	0.025	.001	.001				
Iron	0.30	.017	.017				
Lead	0.0050	.0011	.0011	-0.00060	<0.0050	0.040	* (a)
Magnesium	5.0	.05	.056				
Manganese	0.015	.0005	.001				
Molybdenum	0.050	.0005	.0005				
Nickel	0.040	.0005	.0005				
Potassium	10	.2	.2				
Selenium	0.010	.0023	.0023	0.0018	<0.010	0.025	<0.10
Silver	0.010	.00065	.00077	0.00010	<0.010	0.0020	<0.10
Sodium	10	.5	.5				
Strontium	0.010	.0004	.0004				
Thallium	0.010	.0015	.002				
Tin	0.050	.0007	.001				
Titanium	0.010	.0009	.001				
Vanadium	0.050	.0005	.0005				
Zinc	0.020	.003	.01				

Associated samples MP26742: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible positive bias, but all sample results < DL.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26742
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 01/29/14

Metal	FA11987-1L Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.067	21.3	20.0	106.2	80-120
Barium	0.0	22.1	20.0	110.5	80-120
Beryllium					
Cadmium	0.17	0.69	0.50	104.0	80-120
Calcium					
Chromium	0.92	3.0	2.0	104.0	80-120
Cobalt					
Copper					
Iron					
Lead	0.0	5.0	5.0	100.0	80-120
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium	0.38	23.6	20.0	116.1	80-120
Silver	0.0	0.48	0.50	96.0	80-120
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP26742: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26742
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date:					01/29/14				01/29/14	
Metal	FA11987-1L Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit	FA11903-6L Original	DUP	RPD	QC Limits
Aluminum										
Antimony										
Arsenic	0.067	20.8	20.0	103.7	2.4	20	0.0	0.0	NC	0-20
Barium	0.0	21.6	20.0	108.0	2.3	20	0.24	0.19	23.3 (a)	0-20
Beryllium										
Cadmium	0.17	0.68	0.50	102.0	1.5	20	0.0	0.0	NC	0-20
Calcium										
Chromium	0.92	2.9	2.0	99.0	3.4	20	0.0	0.0	NC	0-20
Cobalt										
Copper										
Iron										
Lead	0.0	4.9	5.0	98.0	2.0	20	0.0	0.0	NC	0-20
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium	0.38	23.0	20.0	113.1	2.6	20	0.026	0.033	23.7 (a)	0-20
Silver	0.0	0.47	0.50	94.0	2.1	20	0.0	0.0	NC	0-20
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP26742: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26742
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date:			01/29/14				01/29/14	
Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum								
Antimony								
Arsenic	2.0	2.0	100.0	80-120	21.7	20.0	108.5	80-120
Barium	2.2	2.0	110.0	80-120	22.7	20.0	113.5	80-120
Beryllium								
Cadmium	0.054	0.050	108.0	80-120	0.56	0.50	112.0	80-120
Calcium								
Chromium	0.22	0.20	110.0	80-120	2.2	2.0	110.0	80-120
Cobalt								
Copper								
Iron								
Lead	0.49	0.50	98.0	80-120	5.2	5.0	104.0	80-120
Magnesium								
Manganese								
Molybdenum								
Nickel								
Potassium								
Selenium	2.1	2.0	105.0	80-120	22.8	20.0	114.0	80-120
Silver	0.050	0.050	100.0	80-120	0.52	0.50	104.0	80-120
Sodium								
Strontium								
Thallium								
Tin								
Titanium								
Vanadium								
Zinc								

Associated samples MP26742: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

QC Batch ID: MP26742
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 01/29/14

Metal	FA11987-1L Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	6.70	19.3	188.1(a)	0-10
Barium	0.00	0.00	NC	0-10
Beryllium				
Cadmium	16.6	0.00	100.0(a)	0-10
Calcium				
Chromium	92.1	97.2	5.5	0-10
Cobalt				
Copper				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	37.6	52.8	40.4 (a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP26742: FA11903-6L

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Southeast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide Reactivity	GP23353/GN59909	1.5	0.0	mg/kg	49.95	0.0	0.0	0-100%
Sulfide Reactivity	GP23352/GN59893	50	0.0	mg/kg	537	495	92.2	0-100%

Associated Samples:
Batch GP23352: FA11903-6
Batch GP23353: FA11903-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA11903
Account: TETRCAI - Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Corrosivity as pH	GN59921	FA11636-1	su	10.7	10.6	0.8	0-%
Cyanide Reactivity	GP23353/GN59909	FA11820-7	mg/kg	1.5 U	0.0	0.0	0-30%
Ignitability (Flashpoint)	GN59910	FA11987-1	Deg. F	>200	>200(a)	0.0	0-38%
Solids, Percent	GN59878	FA11840-1	%	95.9	95.4	0.5	0-5%
Solids, Percent	GN59905	FA11903-5	%	91.1	91.2	0.1	0-5%
Solids, Percent	GN59905	FA11903-4	%	90.9	90.2	0.8	0-5%
Sulfide Reactivity	GP23352/GN59893	FA11820-7	mg/kg	58 U	0.00	0.2	0-30%

Associated Samples:
Batch GN59878: FA11903-6
Batch GN59905: FA11903-1, FA11903-2, FA11903-3, FA11903-4, FA11903-5
Batch GN59910: FA11903-6
Batch GN59921: FA11903-6
Batch GP23352: FA11903-6
Batch GP23353: FA11903-6
(*) Outside of QC limits
(a) Not ignitable.

APPENDIX G.3

GROUNDWATER ANALYTICAL REPORT

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Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # F112480 PAGE 1 OF 1

Accutest Quote # SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 VonKarman Av. Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabina Sudeko E-mail:
Phone#: 949-839-5022
Sampler(s) Name(s) (Printed): Jacob Birkett

Project Information

Project Name: USIS at MCB Camp Lejeune AS705
Street:
City: Jacksonville State: NC
Project #: 4659WE03
Fax #:
Client Purchase Order #: 1036713-20

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	H2SO4	NaOH	ZnAc/NaOH	DI WATER	HNO3	EPA 602 w/ xylenes	EPA 625 base/neutrals (w/ 8270 list for Long Term)	MADEP VPH	MADEP EPH	EDB EPA 504	AG TRC	IP DISPOSAL	PCBs	Total Metals	Full TCLP organics / Full TCLP metals	Soil Disposal	TPH GRO	Matrix Codes
1	AS705-MW01	2-13-14	1017	JB	GW	13		6	6		2				3	2	3	2	3	2							
2	AS705-TB01	2-13-14	0900	Lab	QC	2			2						2												
	AS705/1932-Soil IDW	2-13-14	1200	JB	SO	6		4																1	2		
	AS705-AQIDW-20140213	2-13-14	1017	JB	GW	5		4			1																
																				2	2	1					

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [x] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [x] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FedEx Airbill # 8047-3475-2722

Report IDW samples seperately

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1 Jacob Birkett	Date Time: 2-13-14 1534	Received By: 2 FedEx	Relinquished by: 3 FedEx	02-14-14	Date Time: 1015	Received By:
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7		Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 2.4

Southeast
ACCUTEST LABORATORIES

02/24/14

Technical Report for

Tetra Tech EC, Inc

WE03, Camp Lejuene, NC

4659WE03

Accutest Job Number: FA12480

Sampling Date: 02/13/14

Report to:

Tetra Tech EC, Inc
17885 Von Karman Ave Suite 500
Irvine, CA 92614
lisa.bienkowski@tetratech.com; sabina.sudoko@tetratech.com

ATTN: Lisa Bienkowski

Total number of pages in report: **44**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

Sections: 1 2 3 4 5 6 7 8

Table of Contents

Accutest Laboratories

Sample Summary

Tetra Tech EC, Inc

Job No: FA12480

WE03, Camp Lejuene, NC
Project No: 4659WE03

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12480-1	02/13/14	10:17	JB	02/14/14	AQ	Ground Water	AS705-MW01
FA12480-2	02/13/14	09:00	JB	02/14/14	AQ	Trip Blank Water	AS705-TB01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech EC, Inc **Job No:** FA12480

Site: WE03, Camp Lejuene, NC **Report Date** 2/24/2014 8:32:37 PM

1 Sample and 1 Trip Blank were collected on 02/13/2014 and were received at Accutest SE on 02/14/2014 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of FA12480. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method EPA 625

Matrix: AQ **Batch ID:** OP50554

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12584-1MS, FA12584-1MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzoic Acid, Di-n-octyl phthalate are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike

OP50554-MS: Dilution required due to matrix interference.

OP50554-MSD: Dilution required due to matrix interference.

Volatiles by GC By Method EPA 504.1

Matrix: AQ **Batch ID:** OP50494

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12480-1MS, FA12480-1MSD were used as the QC samples indicated.

Volatiles by GC By Method EPA 602

Matrix: AQ **Batch ID:** GEF6137

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12480-1MS, FA12480-1MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for 1,2-Dichlorobenzene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix: AQ **Batch ID:** GUV3347

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12480-1DUP was used as the QC samples indicated.

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: AQ **Batch ID:** OP50527

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12480-1DUP was used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

_____ Date: February 24, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA12480
Account: Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC
Collected: 02/13/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA12480-1	**AS705-MW01**					
3&4-Methylphenol		13.2	4.7	1.9	ug/l	EPA 625
Phenol		2.9 J	4.7	1.9	ug/l	EPA 625
Acenaphthene		0.95 J	4.7	0.94	ug/l	EPA 625
Dimethyl phthalate		1.6 J	4.7	0.94	ug/l	EPA 625
1-Methylnaphthalene		5.6	4.7	0.94	ug/l	EPA 625
2-Methylnaphthalene		5.4	4.7	0.94	ug/l	EPA 625
Total TIC, Semi-Volatile		186 J		[a]	ug/l	
C9- C12 Aliphatics (Unadj.)		92.6 J	100	35 [a]	ug/l	MADEP VPH REV 1.1
C9- C10 Aromatics (Unadj.)		250	100	35 [a]	ug/l	MADEP VPH REV 1.1
C11-C22 Aromatics (Unadj.)		367	190	140 [a]	ug/l	MADEP EPH REV 1.1
FA12480-2	**AS705-TB01**					

No hits reported in this sample.

(a) Value reported is laboratory DL (MDL).

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AS705-MW01
Lab Sample ID: FA12480-1
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: WE03, Camp Lejuene, NC

Date Sampled: 02/13/14
Date Received: 02/14/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011669.D	1	02/21/14	FS	02/20/14	OP50554	ST554
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
65-85-0	Benzoic Acid	24 U	47	24	ug/l	
95-57-8	2-Chlorophenol	0.94 U	4.7	0.94	ug/l	
59-50-7	4-Chloro-3-methyl phenol	0.94 U	4.7	0.94	ug/l	
120-83-2	2,4-Dichlorophenol	0.94 U	4.7	0.94	ug/l	
105-67-9	2,4-Dimethylphenol	1.9 U	4.7	1.9	ug/l	
51-28-5	2,4-Dinitrophenol	19 U	24	19	ug/l	
534-52-1	4,6-Dinitro-o-cresol	3.8 U	9.4	3.8	ug/l	
95-48-7	2-Methylphenol	0.94 U	4.7	0.94	ug/l	
	3&4-Methylphenol	13.2	4.7	1.9	ug/l	
88-75-5	2-Nitrophenol	0.94 U	4.7	0.94	ug/l	
100-02-7	4-Nitrophenol	9.4 U	24	9.4	ug/l	
87-86-5	Pentachlorophenol	9.4 U	24	9.4	ug/l	
108-95-2	Phenol	2.9	4.7	1.9	ug/l	J
88-06-2	2,4,6-Trichlorophenol	1.9 U	4.7	1.9	ug/l	
83-32-9	Acenaphthene	0.95	4.7	0.94	ug/l	J
208-96-8	Acenaphthylene	0.94 U	4.7	0.94	ug/l	
120-12-7	Anthracene	0.94 U	4.7	0.94	ug/l	
56-55-3	Benzo(a)anthracene	0.94 U	4.7	0.94	ug/l	
50-32-8	Benzo(a)pyrene	0.94 U	4.7	0.94	ug/l	
205-99-2	Benzo(b)fluoranthene	0.94 U	4.7	0.94	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.94 U	4.7	0.94	ug/l	
207-08-9	Benzo(k)fluoranthene	0.94 U	4.7	0.94	ug/l	
101-55-3	4-Bromophenyl phenyl ether	0.94 U	4.7	0.94	ug/l	
85-68-7	Butyl benzyl phthalate	1.9 U	4.7	1.9	ug/l	
100-51-6	Benzyl Alcohol	1.9 U	4.7	1.9	ug/l	
91-58-7	2-Chloronaphthalene	0.94 U	4.7	0.94	ug/l	
106-47-8	4-Chloroaniline	0.94 U	4.7	0.94	ug/l	
218-01-9	Chrysene	0.94 U	4.7	0.94	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	0.94 U	4.7	0.94	ug/l	
111-44-4	bis(2-Chloroethyl)ether	0.94 U	4.7	0.94	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	0.94 U	4.7	0.94	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	0.94 U	4.7	0.94	ug/l	

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-MW01
Lab Sample ID: FA12480-1
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: WE03, Camp Lejuene, NC

Date Sampled: 02/13/14
Date Received: 02/14/14
Percent Solids: n/a

ABN List for NC, May 2012

CAS No.	Compound	Result	LOQ	LOD	Units	Q
95-50-1	1,2-Dichlorobenzene	1.9 U	4.7	1.9	ug/l	
122-66-7	1,2-Diphenylhydrazine	0.94 U	4.7	0.94	ug/l	
541-73-1	1,3-Dichlorobenzene	1.9 U	4.7	1.9	ug/l	
106-46-7	1,4-Dichlorobenzene	1.9 U	4.7	1.9	ug/l	
91-94-1	3,3'-Dichlorobenzidine	1.9 U	4.7	1.9	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.94 U	4.7	0.94	ug/l	
132-64-9	Dibenzofuran	0.94 U	4.7	0.94	ug/l	
84-74-2	Di-n-butyl phthalate	1.9 U	4.7	1.9	ug/l	
117-84-0	Di-n-octyl phthalate	1.9 U	4.7	1.9	ug/l	
84-66-2	Diethyl phthalate	1.9 U	4.7	1.9	ug/l	
131-11-3	Dimethyl phthalate	1.6	4.7	0.94	ug/l	J
117-81-7	bis(2-Ethylhexyl)phthalate	1.9 U	4.7	1.9	ug/l	
206-44-0	Fluoranthene	0.94 U	4.7	0.94	ug/l	
86-73-7	Fluorene	0.94 U	4.7	0.94	ug/l	
118-74-1	Hexachlorobenzene	0.94 U	4.7	0.94	ug/l	
87-68-3	Hexachlorobutadiene	0.94 U	4.7	0.94	ug/l	
77-47-4	Hexachlorocyclopentadiene	1.9 U	4.7	1.9	ug/l	
67-72-1	Hexachloroethane	1.9 U	4.7	1.9	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.94 U	4.7	0.94	ug/l	
78-59-1	Isophorone	0.94 U	4.7	0.94	ug/l	
90-12-0	1-Methylnaphthalene	5.6	4.7	0.94	ug/l	
91-57-6	2-Methylnaphthalene	5.4	4.7	0.94	ug/l	
91-20-3	Naphthalene	0.94 U	4.7	0.94	ug/l	
98-95-3	Nitrobenzene	0.94 U	4.7	0.94	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	0.94 U	4.7	0.94	ug/l	
86-30-6	N-Nitrosodiphenylamine	1.9 U	4.7	1.9	ug/l	
85-01-8	Phenanthrene	0.94 U	4.7	0.94	ug/l	
129-00-0	Pyrene	0.94 U	4.7	0.94	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.94 U	4.7	0.94	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	31%		14-67%
4165-62-2	Phenol-d5	18%		10-50%
118-79-6	2,4,6-Tribromophenol	79%		33-118%
4165-60-0	Nitrobenzene-d5	81%		42-108%
321-60-8	2-Fluorobiphenyl	82%		40-106%
1718-51-0	Terphenyl-d14	90%		39-121%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-MW01
Lab Sample ID: FA12480-1
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: WE03, Camp Lejuene, NC

Date Sampled: 02/13/14
Date Received: 02/14/14
Percent Solids: n/a

ABN List for NC, May 2012

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
503-74-2	Butanoic acid, 3-methyl-	4.16	34	ug/l	JN
116-53-0	Butanoic acid, 2-methyl-	4.24	13	ug/l	JN
3877-19-8	Naphthalene, 1,2,3,4-tetrahydro-2-methyl	6.76	15	ug/l	JN
1559-81-5	Naphthalene, 1,2,3,4-tetrahydro-1-methyl	6.83	19	ug/l	JN
99-94-5	Benzoic acid, 4-methyl-	6.86	11	ug/l	JN
2809-64-5	Naphthalene, 1,2,3,4-tetrahydro-5-methyl	7.13	39	ug/l	JN
120-72-9	Indole	7.30	11	ug/l	JN
334-48-5	n-Decanoic acid	7.70	13	ug/l	JN
1076-61-5	Naphthalene, 1,2,3,4-tetrahydro-6,7-dime	8.13	21	ug/l	JN
575-37-1	Naphthalene, 1,7-dimethyl-	8.38	10	ug/l	JN
	Total TIC, Semi-Volatile		186	ug/l	J

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-MW01
Lab Sample ID: FA12480-1
Matrix: AQ - Ground Water
Method: EPA 504.1 EPA 504.1
Project: WE03, Camp Lejuene, NC

Date Sampled: 02/13/14
Date Received: 02/14/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD74184.D	1	02/17/14	NG	02/17/14	OP50494	GDD2224
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	Units	Q
106-93-4	1,2-Dibromoethane	0.0097 U	0.019	0.0097	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%		63-137%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-MW01		
Lab Sample ID:	FA12480-1	**Date Sampled:**	02/13/14
Matrix:	AQ - Ground Water	**Date Received:**	02/14/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV062863.D	1	02/18/14	MM	n/a	n/a	GUV3347
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MADEP VPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C5- C8 Aliphatics (Unadj.)	35 U	100	35 [a]	ug/l	
	C9- C12 Aliphatics (Unadj.)	92.6	100	35 [a]	ug/l	J
	C9- C10 Aromatics (Unadj.)	250	100	35 [a]	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	119%		70-130%
460-00-4	BFB	117%		70-130%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-MW01		
Lab Sample ID:	FA12480-1	**Date Sampled:**	02/13/14
Matrix:	AQ - Ground Water	**Date Received:**	02/14/14
Method:	EPA 602	**Percent Solids:**	n/a
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF117850.D	1	02/19/14	SH	n/a	n/a	GEF6137
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
71-43-2	Benzene	0.75 U	1.0	0.75	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	ug/l	
1330-20-7	Xylenes (total)	1.5 U	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		73-122%
98-08-8	aaa-Trifluorotoluene	92%		76-118%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AS705-MW01
Lab Sample ID: FA12480-1
Matrix: AQ - Ground Water
Method: MADEP EPH REV 1.1 SW846 3510C
Project: WE03, Camp Lejuene, NC

Date Sampled: 02/13/14
Date Received: 02/14/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN007742.D	1	02/21/14	NAF	02/19/14	OP50527	GNN338
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
	C11-C22 Aromatics (Unadj.)	367	190	140 [a]	ug/l	
	C9-C18 Aliphatics	93 U	190	93 [a]	ug/l	
	C19-C36 Aliphatics	93 U	190	93 [a]	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	50%		40-140%
580-13-2	2-Bromonaphthalene	92%		40-140%
84-15-1	o-Terphenyl	65%		40-140%
321-60-8	2-Fluorobiphenyl	85%		40-140%

(a) Value reported is laboratory DL (MDL).

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AS705-TB01		
Lab Sample ID:	FA12480-2	**Date Sampled:**	02/13/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/14/14
Method:	EPA 602	**Percent Solids:**	n/a
Project:	WE03, Camp Lejuene, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF117851.D	1	02/19/14	SH	n/a	n/a	GEF6137
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
71-43-2	Benzene	0.75 U	1.0	0.75	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	ug/l	
1330-20-7	Xylenes (total)	1.5 U	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		73-122%
98-08-8	aaa-Trifluorotoluene	91%		76-118%

U = Not detected LOD - Limit of Detection
LOQ = Limit of Quantitation
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions (DOD)
- Chain of Custody

Parameter Certification Exceptions

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

The following parameters included in this report are exceptions to DOD certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Acenaphthene	83-32-9	EPA 625	AQ	Accutest is not certified for this parameter.
Acenaphthylene	208-96-8	EPA 625	AQ	Accutest is not certified for this parameter.
Anthracene	120-12-7	EPA 625	AQ	Accutest is not certified for this parameter.
4-Bromophenyl phenyl ether	101-55-3	EPA 625	AQ	Accutest is not certified for this parameter.
Benzo(a)anthracene	56-55-3	EPA 625	AQ	Accutest is not certified for this parameter.
Benzo(a)pyrene	50-32-8	EPA 625	AQ	Accutest is not certified for this parameter.
Benzo(b)fluoranthene	205-99-2	EPA 625	AQ	Accutest is not certified for this parameter.
Benzo(g,h,i)perylene	191-24-2	EPA 625	AQ	Accutest is not certified for this parameter.
Benzo(k)fluoranthene	207-08-9	EPA 625	AQ	Accutest is not certified for this parameter.
Benzoic Acid	65-85-0	EPA 625	AQ	Accutest is not certified for this parameter.
Benzyl Alcohol	100-51-6	EPA 625	AQ	Accutest is not certified for this parameter.
Butyl benzyl phthalate	85-68-7	EPA 625	AQ	Accutest is not certified for this parameter.
2-Chloronaphthalene	91-58-7	EPA 625	AQ	Accutest is not certified for this parameter.
2-Chlorophenol	95-57-8	EPA 625	AQ	Accutest is not certified for this parameter.
4-Chloro-3-methyl phenol	59-50-7	EPA 625	AQ	Accutest is not certified for this parameter.
4-Chloroaniline	106-47-8	EPA 625	AQ	Accutest is not certified for this parameter.
4-Chlorophenyl phenyl ether	7005-72-3	EPA 625	AQ	Accutest is not certified for this parameter.
Chrysene	218-01-9	EPA 625	AQ	Accutest is not certified for this parameter.
bis(2-Chloroethoxy)methane	111-91-1	EPA 625	AQ	Accutest is not certified for this parameter.
bis(2-Chloroethyl)ether	111-44-4	EPA 625	AQ	Accutest is not certified for this parameter.
bis(2-Chloroisopropyl)ether	108-60-1	EPA 625	AQ	Accutest is not certified for this parameter.
1,2-Dichlorobenzene	95-50-1	EPA 625	AQ	Accutest is not certified for this parameter.
1,2-Diphenylhydrazine	122-66-7	EPA 625	AQ	Accutest is not certified for this parameter.
1,3-Dichlorobenzene	541-73-1	EPA 625	AQ	Accutest is not certified for this parameter.
1,4-Dichlorobenzene	106-46-7	EPA 625	AQ	Accutest is not certified for this parameter.
2,4-Dichlorophenol	120-83-2	EPA 625	AQ	Accutest is not certified for this parameter.
2,4-Dimethylphenol	105-67-9	EPA 625	AQ	Accutest is not certified for this parameter.
2,4-Dinitrophenol	51-28-5	EPA 625	AQ	Accutest is not certified for this parameter.
3,3'-Dichlorobenzidine	91-94-1	EPA 625	AQ	Accutest is not certified for this parameter.
4,6-Dinitro-o-cresol	534-52-1	EPA 625	AQ	Accutest is not certified for this parameter.
Di-n-butyl phthalate	84-74-2	EPA 625	AQ	Accutest is not certified for this parameter.
Di-n-octyl phthalate	117-84-0	EPA 625	AQ	Accutest is not certified for this parameter.
Dibenzo(a,h)anthracene	53-70-3	EPA 625	AQ	Accutest is not certified for this parameter.
Dibenzofuran	132-64-9	EPA 625	AQ	Accutest is not certified for this parameter.
Diethyl phthalate	84-66-2	EPA 625	AQ	Accutest is not certified for this parameter.
Dimethyl phthalate	131-11-3	EPA 625	AQ	Accutest is not certified for this parameter.
bis(2-Ethylhexyl)phthalate	117-81-7	EPA 625	AQ	Accutest is not certified for this parameter.
Fluoranthene	206-44-0	EPA 625	AQ	Accutest is not certified for this parameter.
Fluorene	86-73-7	EPA 625	AQ	Accutest is not certified for this parameter.
Hexachlorobenzene	118-74-1	EPA 625	AQ	Accutest is not certified for this parameter.
Hexachlorobutadiene	87-68-3	EPA 625	AQ	Accutest is not certified for this parameter.
Hexachlorocyclopentadiene	77-47-4	EPA 625	AQ	Accutest is not certified for this parameter.

Parameter Certification Exceptions

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

The following parameters included in this report are exceptions to DOD certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Hexachloroethane	67-72-1	**EPA 625**	AQ	Accutest is not certified for this parameter.
Indeno(1,2,3-cd)pyrene	193-39-5	**EPA 625**	AQ	Accutest is not certified for this parameter.
Isophorone	78-59-1	**EPA 625**	AQ	Accutest is not certified for this parameter.
1-Methylnaphthalene	90-12-0	**EPA 625**	AQ	Accutest is not certified for this parameter.
2-Methylnaphthalene	91-57-6	**EPA 625**	AQ	Accutest is not certified for this parameter.
2-Methylphenol	95-48-7	**EPA 625**	AQ	Accutest is not certified for this parameter.
3&4-Methylphenol		**EPA 625**	AQ	Accutest is not certified for this parameter.
2-Nitrophenol	88-75-5	**EPA 625**	AQ	Accutest is not certified for this parameter.
4-Nitrophenol	100-02-7	**EPA 625**	AQ	Accutest is not certified for this parameter.
N-Nitroso-di-n-propylamine	621-64-7	**EPA 625**	AQ	Accutest is not certified for this parameter.
N-Nitrosodiphenylamine	86-30-6	**EPA 625**	AQ	Accutest is not certified for this parameter.
Naphthalene	91-20-3	**EPA 625**	AQ	Accutest is not certified for this parameter.
Nitrobenzene	98-95-3	**EPA 625**	AQ	Accutest is not certified for this parameter.
Pentachlorophenol	87-86-5	**EPA 625**	AQ	Accutest is not certified for this parameter.
Phenanthrene	85-01-8	**EPA 625**	AQ	Accutest is not certified for this parameter.
Phenol	108-95-2	**EPA 625**	AQ	Accutest is not certified for this parameter.
Pyrene	129-00-0	**EPA 625**	AQ	Accutest is not certified for this parameter.
1,2,4-Trichlorobenzene	120-82-1	**EPA 625**	AQ	Accutest is not certified for this parameter.
2,4,6-Trichlorophenol	88-06-2	**EPA 625**	AQ	Accutest is not certified for this parameter.
Benzene	71-43-2	**EPA 602**	AQ	Accutest is not certified for this parameter.
Chlorobenzene	108-90-7	**EPA 602**	AQ	Accutest is not certified for this parameter.
1,2-Dibromoethane	106-93-4	**EPA 504.1**	AQ	Accutest is not certified for this parameter.
1,2-Dichlorobenzene	95-50-1	**EPA 602**	AQ	Accutest is not certified for this parameter.
1,3-Dichlorobenzene	541-73-1	**EPA 602**	AQ	Accutest is not certified for this parameter.
1,4-Dichlorobenzene	106-46-7	**EPA 602**	AQ	Accutest is not certified for this parameter.
Ethylbenzene	100-41-4	**EPA 602**	AQ	Accutest is not certified for this parameter.
Toluene	108-88-3	**EPA 602**	AQ	Accutest is not certified for this parameter.
Xylenes (total)	1330-20-7	**EPA 602**	AQ	Accutest is not certified for this parameter.

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA12480 PAGE 1 OF 1

Accutest Quote # SKIFF#

Client / Reporting Information

Company Name: Tetra Tech
Address: 17885 VonKarman Av., Suite 500
City: Irvine State: CA Zip: 92614
Project Contact: Sabra Sudnik E-mail:
Phone#: 949-839-5022
Sampler(s) Name(s) (Printed): Jacob Birkett

Project Information

Project Name: USIs at MCB Camp Lejeune AS705
Street:
City: Jacksonville State: NC
Project #: 4659WE03
Fax #:
Client Purchase Order #: 103673-20

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	HNO3	H2SO4	NaOH/ZnAc	DI Water	MeOH	EPA 602 w/ xylenes	EPA 625 base/neutrals acids w/ target analytes only	MADEP VPH	MADEP EPH	EDB EPA 504	IRC	PCBs	Metals Total	Full TCLP organics	Full TCLP metals	IRC	TPH GRO	TPH DRO
1	AS705-MW01	2-13-14	1017	JB	GW	13		3		6		0	2		13	2	3	2	3	25	20	8					
2	AS705-TB01	2-13-14	0900	Lab	QC	2				2																	
	AS705/1932-Soil IDW	2-13-14	1200	JB	So	6		4															1	1			
	AS705-AQIDW-20140213	2-13-14	1017	JB	GW	5		4			1	0								2	2	1					

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [x] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [x] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FedEx Airbill # 8047 3475 2722
Report IDW samples seperately

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1 Jacob Birkett	Date Time: 2-13-14 1534	Received By: 2 FedEx	Relinquished by: 3 FedEx 02-14-14	Date Time: 1015	Received By: 4
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 2.4

5.2 5

FA12480: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12480 CLIENT: Tetra Tech PROJECT: USTS At MCB 175705

DATE/TIME RECEIVED: 02-14-14 1015 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8047 3475 2722

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [✓] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [✓] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [✓] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.8
- [ ] CORRECTED TEMPS: 2.4

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

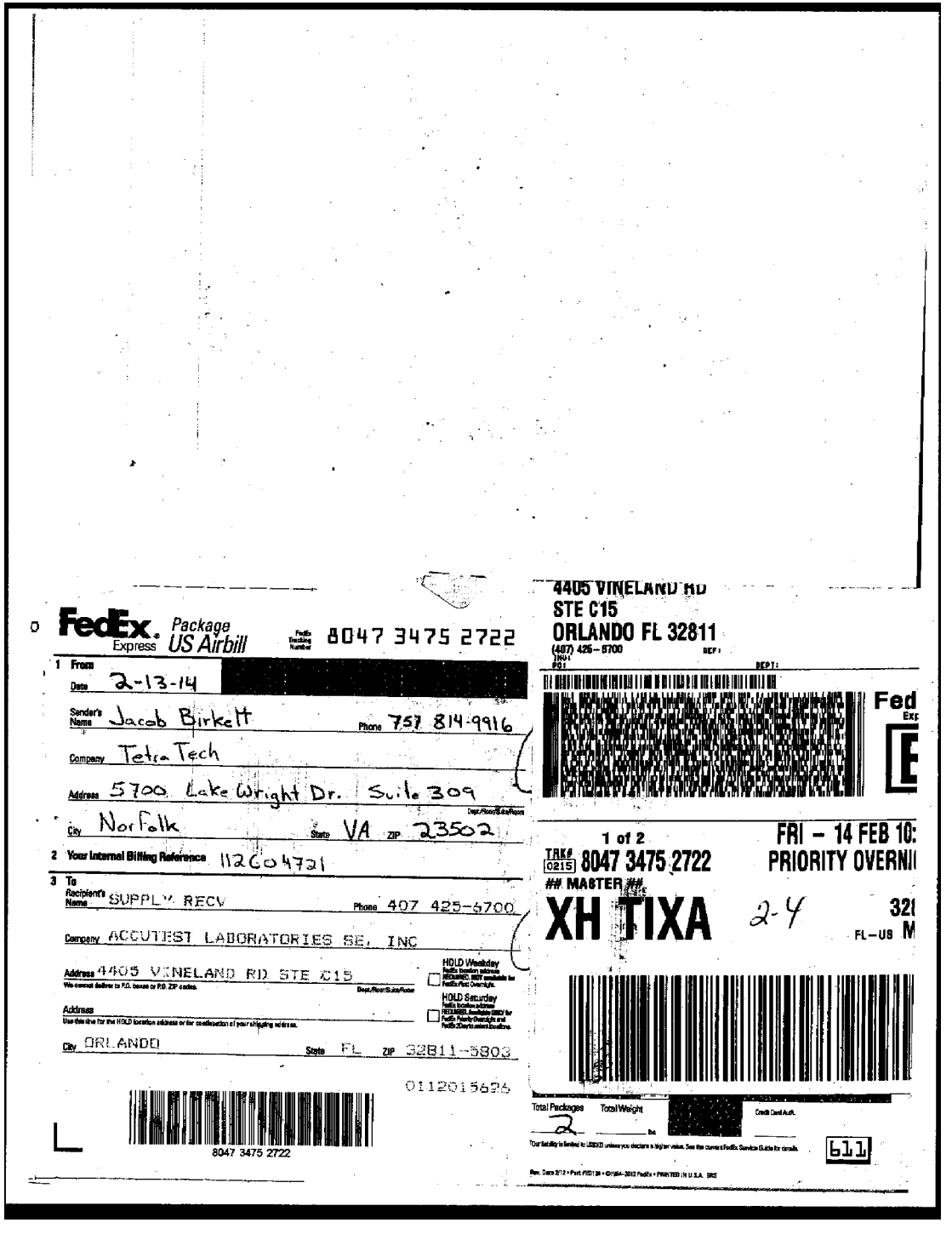
TECHNICIAN SIGNATURE/DATE: RWW 02-14-14 REVIEWER SIGNATURE/DATE: JC 2-14-14

NF 12/10

receipt confirmation 122910.xls

5.2 5

FA12480: Chain of Custody
Page 2 of 3



FedEx Express Package US Airbill 8047 3475 2722

1 From
Date 2-13-14
Sender's Name Jacob Birkett Phone 757 814-9916
Company Tetra Tech
Address 5700 Lake Wright Dr. Suite 309
City Norfolk State VA ZIP 23502

2 Your Internal Billing Reference 112604731

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15
HOLD Weekday
HOLD Saturday
Address
City ORLANDO State FL ZIP 32811-5803

0112015624

8047 3475 2722

4405 VINELAND RD
STE C15
ORLANDO FL 32811
(407) 425-6700

1 of 2
TRK# 0215 8047 3475 2722
MASTER
XH TIXA 2-4
FRI - 14 FEB 10:
PRIORITY OVERNI
321
FL-US M

Total Packages 2 Total Weight lbs Credit Card Auth.

611

FA12480: Chain of Custody
Page 3 of 3

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-MB	T011668.D	1	02/21/14	FS	02/20/14	OP50554	ST554

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.52	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.58	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.50	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.4	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.50	ug/l	
	3&4-Methylphenol	ND	5.0	1.2	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.60	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.0	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.55	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
120-12-7	Anthracene	ND	5.0	0.62	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.64	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.65	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.72	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.81	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.51	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.67	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.81	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.56	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.72	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.55	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.69	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.58	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.54	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.50	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.68	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-MB	T011668.D	1	02/21/14	FS	02/20/14	OP50554	ST554

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

CAS No.	Compound	Result	RL	MDL	Units	Q
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.90	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.81	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.53	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	1.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.63	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.6	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.70	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.66	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	1.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.50	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.63	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.53	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.53	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.60	ug/l	
129-00-0	Pyrene	ND	5.0	0.82	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	43%	14-67%
4165-62-2	Phenol-d5	25%	10-50%
118-79-6	2,4,6-Tribromophenol	86%	33-118%
4165-60-0	Nitrobenzene-d5	87%	42-108%
321-60-8	2-Fluorobiphenyl	85%	40-106%
1718-51-0	Terphenyl-d14	102%	39-121%

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-MB	T011668.D	1	02/21/14	FS	02/20/14	OP50554	ST554

The QC reported here applies to the following samples: **Method:**

FA12480-1

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/l	

(a) No TICs detected.

Blank Spike Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-BS	T011667.D	1	02/21/14	FS	02/20/14	OP50554	ST554

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	15.0	15	10-69
95-57-8	2-Chlorophenol	50	34.1	68	52-98
59-50-7	4-Chloro-3-methyl phenol	50	34.2	68	54-103
120-83-2	2,4-Dichlorophenol	50	34.9	70	53-103
105-67-9	2,4-Dimethylphenol	50	31.8	64	43-90
51-28-5	2,4-Dinitrophenol	100	67.9	68	44-112
534-52-1	4,6-Dinitro-o-cresol	100	76.7	77	66-121
95-48-7	2-Methylphenol	50	31.1	62	43-90
	3&4-Methylphenol	100	59.6	60	36-88
88-75-5	2-Nitrophenol	50	36.0	72	53-102
100-02-7	4-Nitrophenol	100	26.3	26	18-62
87-86-5	Pentachlorophenol	100	82.3	82	61-115
108-95-2	Phenol	50	13.5	27	19-56
88-06-2	2,4,6-Trichlorophenol	50	38.9	78	59-107
83-32-9	Acenaphthene	50	39.7	79	61-107
208-96-8	Acenaphthylene	50	40.7	81	60-104
120-12-7	Anthracene	50	40.4	81	65-108
56-55-3	Benzo(a)anthracene	50	40.0	80	66-111
50-32-8	Benzo(a)pyrene	50	39.2	78	62-107
205-99-2	Benzo(b)fluoranthene	50	40.4	81	65-114
191-24-2	Benzo(g,h,i)perylene	50	40.4	81	66-116
207-08-9	Benzo(k)fluoranthene	50	40.4	81	65-114
101-55-3	4-Bromophenyl phenyl ether	50	33.1	66	65-109
85-68-7	Butyl benzyl phthalate	50	39.3	79	65-112
100-51-6	Benzyl Alcohol	50	31.9	64	46-94
91-58-7	2-Chloronaphthalene	50	38.6	77	57-103
106-47-8	4-Chloroaniline	50	35.6	71	49-105
218-01-9	Chrysene	50	42.2	84	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	34.8	70	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.6	73	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	37.5	75	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	37.7	75	62-105
95-50-1	1,2-Dichlorobenzene	50	34.3	69	48-97
122-66-7	1,2-Diphenylhydrazine	50	38.5	77	61-110
541-73-1	1,3-Dichlorobenzene	50	34.2	68	45-95
106-46-7	1,4-Dichlorobenzene	50	36.2	72	45-98

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-BS	T011667.D	1	02/21/14	FS	02/20/14	OP50554	ST554

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
91-94-1	3,3'-Dichlorobenzidine	50	41.3	83	46-117
53-70-3	Dibenzo(a,h)anthracene	50	40.3	81	66-119
132-64-9	Dibenzofuran	50	39.6	79	61-106
84-74-2	Di-n-butyl phthalate	50	39.9	80	65-107
117-84-0	Di-n-octyl phthalate	50	34.2	68	62-118
84-66-2	Diethyl phthalate	50	39.0	78	64-108
131-11-3	Dimethyl phthalate	50	38.4	77	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	35.4	71	61-117
206-44-0	Fluoranthene	50	41.8	84	63-106
86-73-7	Fluorene	50	41.5	83	62-108
118-74-1	Hexachlorobenzene	50	39.3	79	63-108
87-68-3	Hexachlorobutadiene	50	35.3	71	42-102
77-47-4	Hexachlorocyclopentadiene	50	30.0	60	39-102
67-72-1	Hexachloroethane	50	35.9	72	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	35.2	70	64-119
78-59-1	Isophorone	50	34.2	68	43-87
90-12-0	1-Methylnaphthalene	50	34.2	68	53-102
91-57-6	2-Methylnaphthalene	50	35.0	70	51-102
91-20-3	Naphthalene	50	35.7	71	47-100
98-95-3	Nitrobenzene	50	34.1	68	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	37.3	75	52-104
86-30-6	N-Nitrosodiphenylamine	50	38.8	78	64-108
85-01-8	Phenanthrene	50	40.9	82	66-110
129-00-0	Pyrene	50	37.5	75	64-113
120-82-1	1,2,4-Trichlorobenzene	50	32.6	65	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%
4165-62-2	Phenol-d5	28%	10-50%
118-79-6	2,4,6-Tribromophenol	81%	33-118%
4165-60-0	Nitrobenzene-d5	73%	42-108%
321-60-8	2-Fluorobiphenyl	78%	40-106%
1718-51-0	Terphenyl-d14	87%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-MS [a]	T011682.D	10	02/24/14	FS	02/20/14	OP50554	ST555
OP50554-MSD [a]	T011683.D	10	02/24/14	FS	02/20/14	OP50554	ST555
FA12584-1 [a]	T011681.D	10	02/24/14	FS	02/20/14	OP50554	ST555

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

CAS No.	Compound	FA12584-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		189	ND	0*	ND	0*	nc	10-69/39
95-57-8	2-Chlorophenol	ND		94.3	65.3	69	61.6	65	6	52-98/25
59-50-7	4-Chloro-3-methyl phenol	ND		94.3	76.0	81	70.9	75	7	54-103/23
120-83-2	2,4-Dichlorophenol	ND		94.3	73.0	77	72.1	76	1	53-103/26
105-67-9	2,4-Dimethylphenol	ND		94.3	74.0	78	73.4	78	1	43-90/27
51-28-5	2,4-Dinitrophenol	ND		189	133	70	132	70	1	44-112/25
534-52-1	4,6-Dinitro-o-cresol	ND		189	123	65*	121	64*	2	66-121/23
95-48-7	2-Methylphenol	ND		94.3	63.4	67	65.6	70	3	43-90/28
	3&4-Methylphenol	ND		189	127	67	128	68	1	36-88/28
88-75-5	2-Nitrophenol	ND		94.3	69.4	74	72.7	77	5	53-102/29
100-02-7	4-Nitrophenol	ND		189	139	74*	144	76*	4	18-62/33
87-86-5	Pentachlorophenol	ND		189	155	82	143	76	8	61-115/26
108-95-2	Phenol	ND		94.3	33.7	36	36.8	39	9	19-56/35
88-06-2	2,4,6-Trichlorophenol	ND		94.3	76.9	82	74.8	79	3	59-107/23
83-32-9	Acenaphthene	ND		94.3	82.4	87	81.3	86	1	61-107/22
208-96-8	Acenaphthylene	ND		94.3	82.6	88	78.2	83	5	60-104/22
120-12-7	Anthracene	ND		94.3	81.8	87	78.1	83	5	65-108/20
56-55-3	Benzo(a)anthracene	ND		94.3	76.9	82	72.6	77	6	66-111/22
50-32-8	Benzo(a)pyrene	ND		94.3	70.9	75	69.5	74	2	62-107/23
205-99-2	Benzo(b)fluoranthene	ND		94.3	72.2	77	70.1	74	3	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND		94.3	77.3	82	74.2	79	4	66-116/23
207-08-9	Benzo(k)fluoranthene	ND		94.3	71.6	76	68.1	72	5	65-114/24
101-55-3	4-Bromophenyl phenyl ether	ND		94.3	64.2	68	64.1	68	0	65-109/23
85-68-7	Butyl benzyl phthalate	ND		94.3	75.3	80	72.4	77	4	65-112/24
100-51-6	Benzyl Alcohol	ND		94.3	68.6	73	68.3	72	0	46-94/27
91-58-7	2-Chloronaphthalene	ND		94.3	76.5	81	73.3	78	4	57-103/23
106-47-8	4-Chloroaniline	ND		94.3	69.4	74	69.6	74	0	49-105/27
218-01-9	Chrysene	ND		94.3	77.0	82	76.9	82	0	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	ND		94.3	75.9	80	73.6	78	3	51-102/28
111-44-4	bis(2-Chloroethyl)ether	ND		94.3	71.6	76	70.1	74	2	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		94.3	71.3	76	69.7	74	2	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	ND		94.3	76.7	81	76.3	81	1	62-105/20
95-50-1	1,2-Dichlorobenzene	ND		94.3	66.8	71	65.0	69	3	48-97/24
122-66-7	1,2-Diphenylhydrazine	ND		94.3	72.8	77	71.9	76	1	61-110/24
541-73-1	1,3-Dichlorobenzene	ND		94.3	67.4	71	66.2	70	2	45-95/25
106-46-7	1,4-Dichlorobenzene	ND		94.3	72.2	77	70.4	75	3	45-98/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-MS [a]	T011682.D	10	02/24/14	FS	02/20/14	OP50554	ST555
OP50554-MSD [a]	T011683.D	10	02/24/14	FS	02/20/14	OP50554	ST555
FA12584-1 [a]	T011681.D	10	02/24/14	FS	02/20/14	OP50554	ST555

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

CAS No.	Compound	FA12584-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
91-94-1	3,3'-Dichlorobenzidine	ND		94.3	51.6	55	51.6	55	0	46-117/29
53-70-3	Dibenzo(a,h)anthracene	ND		94.3	75.0	80	67.8	72	10	66-119/24
132-64-9	Dibenzofuran	ND		94.3	84.7	90	81.4	86	4	61-106/21
84-74-2	Di-n-butyl phthalate	ND		94.3	77.5	82	76.0	81	2	65-107/21
117-84-0	Di-n-octyl phthalate	ND		94.3	55.2	59*	53.2	56*	4	62-118/24
84-66-2	Diethyl phthalate	ND		94.3	77.3	82	76.1	81	2	64-108/21
131-11-3	Dimethyl phthalate	ND		94.3	71.7	76	70.5	75	2	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND		94.3	81.7	87	74.6	79	9	61-117/23
206-44-0	Fluoranthene	ND		94.3	81.6	86	80.0	85	2	63-106/21
86-73-7	Fluorene	20.7	J	94.3	95.8	80	95.0	79	1	62-108/20
118-74-1	Hexachlorobenzene	ND		94.3	75.2	80	70.4	75	7	63-108/22
87-68-3	Hexachlorobutadiene	ND		94.3	75.9	80	72.7	77	4	42-102/28
77-47-4	Hexachlorocyclopentadiene	ND		94.3	50.7	54	49.7	53	2	39-102/29
67-72-1	Hexachloroethane	ND		94.3	67.7	72	68.0	72	0	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		94.3	64.9	69	63.1	67	3	64-119/24
78-59-1	Isophorone	ND		94.3	74.1	79	67.7	72	9	43-87/25
90-12-0	1-Methylnaphthalene	21.1	J	94.3	92.1	75	86.9	70	6	53-102/27
91-57-6	2-Methylnaphthalene	5.5	J	94.3	79.4	78	77.8	77	2	51-102/26
91-20-3	Naphthalene	ND		94.3	83.3	88	81.6	86	2	47-100/29
98-95-3	Nitrobenzene	ND		94.3	72.2	77	69.2	73	4	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	ND		94.3	73.2	78	69.8	74	5	52-104/25
86-30-6	N-Nitrosodiphenylamine	9.7	J	94.3	80.2	75	79.1	74	1	64-108/23
85-01-8	Phenanthrene	11.4	J	94.3	88.5	82	84.9	78	4	66-110/21
129-00-0	Pyrene	ND		94.3	74.2	79	69.2	73	7	64-113/23
120-82-1	1,2,4-Trichlorobenzene	ND		94.3	72.6	77	69.5	74	4	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA12584-1	Limits
367-12-4	2-Fluorophenol	55%	53%	38%	14-67%
4165-62-2	Phenol-d5	40%	39%	26%	10-50%
118-79-6	2,4,6-Tribromophenol	84%	78%	86%	33-118%
4165-60-0	Nitrobenzene-d5	80%	75%	83%	42-108%
321-60-8	2-Fluorobiphenyl	82%	79%	86%	40-106%
1718-51-0	Terphenyl-d14	89%	81%	88%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50554-MS [a]	T011682.D	10	02/24/14	FS	02/20/14	OP50554	ST555
OP50554-MSD [a]	T011683.D	10	02/24/14	FS	02/20/14	OP50554	ST555
FA12584-1 [a]	T011681.D	10	02/24/14	FS	02/20/14	OP50554	ST555

The QC reported here applies to the following samples: **Method:** EPA 625

FA12480-1

(a) Dilution required due to matrix interference.

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEF6137-MB	EF117849.D	1	02/19/14	SH	n/a	n/a	GEF6137

The QC reported here applies to the following samples: **Method:** EPA 602

FA12480-1, FA12480-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	87%	73-122%
98-08-8	aaa-Trifluorotoluene	90%	76-118%

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3347-MB	UV062862.D	1	02/18/14	MM	n/a	n/a	GUV3347

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA12480-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	100	35	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	100	35	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	100	35	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	BFB	115%	70-130%
460-00-4	BFB	115%	70-130%

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50494-MB	DD74182.D	1	02/17/14	NG	02/17/14	OP50494	GDD2224

The QC reported here applies to the following samples: **Method:** EPA 504.1

FA12480-1

CAS No.	Compound	Result	RL	MDL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	90%	63-137%

Blank Spike Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEF6137-BS	EF117848.D	1	02/19/14	SH	n/a	n/a	GEF6137

The QC reported here applies to the following samples: **Method:** EPA 602

FA12480-1, FA12480-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.3	97	82-121
108-90-7	Chlorobenzene	20	18.6	93	79-119
95-50-1	1,2-Dichlorobenzene	20	19.2	96	74-120
541-73-1	1,3-Dichlorobenzene	20	18.5	93	77-120
106-46-7	1,4-Dichlorobenzene	20	18.4	92	76-118
100-41-4	Ethylbenzene	20	19.2	96	79-123
108-88-3	Toluene	20	19.1	96	81-120
1330-20-7	Xylenes (total)	60	56.8	95	77-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	97%	73-122%
98-08-8	aaa-Trifluorotoluene	92%	76-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50494-BS	DD74181.D	1	02/17/14	NG	02/17/14	OP50494	GDD2224

The QC reported here applies to the following samples: **Method:** EPA 504.1

FA12480-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-93-4	1,2-Dibromoethane	0.25	0.22	88	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	92%	63-137%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV3347-BS	UV062857.D	1	02/18/14	MM	n/a	n/a	GUV3347
GUV3347-BSD	UV062858.D	1	02/18/14	MM	n/a	n/a	GUV3347

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA12480-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	C5- C8 Aliphatics (Unadj.)	240	281	117	283	118	1	70-130/25
	C9- C12 Aliphatics (Unadj.)	160	165	103	168	105	2	70-130/25
	C9- C10 Aromatics (Unadj.)	80	82.4	103	82.6	103	0	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	BFB	120%	119%	70-130%
460-00-4	BFB	116%	116%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12480-1MS	EF117852.D	1	02/19/14	SH	n/a	n/a	GEF6137
FA12480-1MSD	EF117853.D	1	02/19/14	SH	n/a	n/a	GEF6137
FA12480-1	EF117850.D	1	02/19/14	SH	n/a	n/a	GEF6137

The QC reported here applies to the following samples: **Method:** EPA 602

FA12480-1, FA12480-2

CAS No.	Compound	FA12480-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.0	U	20	20.0	100	19.9	100	1	82-121/9
108-90-7	Chlorobenzene	1.0	U	20	19.4	97	19.4	97	0	79-119/9
95-50-1	1,2-Dichlorobenzene	1.0	U	20	32.0	160*	32.0	160*	0	74-120/13
541-73-1	1,3-Dichlorobenzene	1.0	U	20	22.8	114	23.0	115	1	77-120/10
106-46-7	1,4-Dichlorobenzene	1.0	U	20	20.8	104	21.2	106	2	76-118/10
100-41-4	Ethylbenzene	0.55		20	20.4	99	20.3	99	0	79-123/10
108-88-3	Toluene	1.0	U	20	19.7	99	19.7	99	0	81-120/9
1330-20-7	Xylenes (total)	3.0	U	60	59.9	100	59.8	100	0	77-121/10

CAS No.	Surrogate Recoveries	MS	MSD	FA12480-1	Limits
460-00-4	4-Bromofluorobenzene	105%	105%	101%	73-122%
98-08-8	aaa-Trifluorotoluene	94%	95%	92%	76-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50494-MS	DD74185.D	1	02/17/14	NG	02/17/14	OP50494	GDD2224
OP50494-MSD	DD74186.D	1	02/17/14	NG	02/17/14	OP50494	GDD2224
FA12480-1	DD74184.D	1	02/17/14	NG	02/17/14	OP50494	GDD2224

The QC reported here applies to the following samples: **Method:** EPA 504.1

FA12480-1

CAS No.	Compound	FA12480-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-93-4	1,2-Dibromoethane	0.019	U	0.243	0.21	86	0.21	88	0	70-130/25

CAS No.	Surrogate Recoveries	MS	MSD	FA12480-1	Limits
460-00-4	4-Bromofluorobenzene	87%	88%	87%	63-137%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12480-1DUP	UV062861.D	1	02/18/14	MM	n/a	n/a	GUV3347
FA12480-1	UV062863.D	1	02/18/14	MM	n/a	n/a	GUV3347

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA12480-1

CAS No.	Compound	FA12480-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
	C5- C8 Aliphatics (Unadj.)	100 U		ND		nc	50
	C9- C12 Aliphatics (Unadj.)	92.6	J	88.7	J	4	50
	C9- C10 Aromatics (Unadj.)	250		244		2	50

CAS No.	Surrogate Recoveries	DUP	FA12480-1	Limits
460-00-4	BFB	119%	119%	70-130%
460-00-4	BFB	118%	117%	70-130%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50527-MB	NN007736.D	1	02/21/14	NAF	02/19/14	OP50527	GNN338

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA12480-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	200	150	ug/l	
	C9-C18 Aliphatics	ND	200	100	ug/l	
	C19-C36 Aliphatics	ND	200	100	ug/l	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	69%	40-140%
580-13-2	2-Bromonaphthalene	91%	40-140%
84-15-1	o-Terphenyl	75%	40-140%
321-60-8	2-Fluorobiphenyl	88%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50527-BS	NN007734.D	1	02/21/14	NAF	02/19/14	OP50527	GNN338
OP50527-BSD	NN007735.D	1	02/21/14	NAF	02/19/14	OP50527	GNN338

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA12480-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj.)	1700	1210	71	1250	74	3	40-140/30
	C9-C18 Aliphatics	600	287	48	296	49	3	40-140/30
	C19-C36 Aliphatics	800	627	78	661	83	5	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	76%	80%	40-140%
580-13-2	2-Bromonaphthalene	82%	84%	40-140%
84-15-1	o-Terphenyl	69%	69%	40-140%
321-60-8	2-Fluorobiphenyl	75%	79%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP50527-BS	2-Methylnaphthalene	41.6	ND	0.0%	5.0
OP50527-BS	Naphthalene	35.8	ND	0.0%	5.0
OP50527-BSD	2-Methylnaphthalene	43.0	ND	0.0%	5.0
OP50527-BSD	Naphthalene	37.8	ND	0.0%	5.0

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA12480
Account: TETRCAI Tetra Tech EC, Inc
Project: WE03, Camp Lejuene, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50527-DUP	NN007743.D	1	02/21/14	NAF	02/19/14	OP50527	GNN338
FA12480-1	NN007742.D	1	02/21/14	NAF	02/19/14	OP50527	GNN338

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA12480-1

CAS No.	Compound	FA12480-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
	C11-C22 Aromatics (Unadj.)	367		394		7	30 [a]
	C9-C18 Aliphatics	190 U		ND		nc	30 [a]
	C19-C36 Aliphatics	190 U		ND		nc	30 [a]

CAS No.	Surrogate Recoveries	DUP	FA12480-1	Limits
3386-33-2	1-Chlorooctadecane	56%	50%	40-140%
580-13-2	2-Bromonaphthalene	112%	92%	40-140%
84-15-1	o-Terphenyl	69%	65%	40-140%
321-60-8	2-Fluorobiphenyl	96%	85%	40-140%

(a) Advisory control limits.

* = Outside of Control Limits.

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APPENDIX H

SOIL WASTE MANIFESTS

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NON-HAZARDOUS WASTE MANIFEST

1. Generator: NC6170022580 | 2. Page 1 of 1 | 3. Emergency Response Phone | 4. Waste Tracking Number 74015

5. Generator's Name and Mailing Address
Commanding General MCI East-MCB
12 Post Lane
MCB Camp Lejuene, NC 28547 910 451 9017

Generator's Site Address (if different than mailing address)
MC Airstation New River
A5705 Flounder Rd.
Camp Lejuene, NC 28542

Generator's Phone:

6. Transporter 1 Company Name
Thurmond Trucking TT23 910 483 0066

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
E S & J ENTERPRISES, INC.
1555 HOLLAND RD. - AUTRYVILLE, NC 28318

U.S. EPA ID Number
SR0600035

Facility's Phone: (910) 567-6138

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	Ticket # 1061 AS 9:07
1.	PETROLEUM CONTAMINATED SOIL	01	PT	68160 24460 43700	LBS.	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: EUGENE Jones | Signature: Eugene Jones | Month 12 | Day 6 | Year 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DARRELL Smith | Signature: Darrell Smith | Month 2 | Day 6 | Year 14

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY'S COPY

169-BLS-C 5 11979 (Rev. 9/09)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
NC6170022580	1		14016

GENERATOR

5. Generator's Name and Mailing Address
Commanding General MCI East-MCB
12 Post Lane
MCB Camp Lejeune, NC 28547
Generator's Phone: TT23 910 4519011

Generator's Site Address (if different than mailing address)
MC Airstation New River
AS 705 Flounder Rd.
Camp Lejeune, NC 28542

6. Transporter 1 Company Name
THurmond Trucking TT21 910 483 0006

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
E S & J ENTERPRISES, INC.
1555 HOLLAND RD. - AUTRYVILLE, NC 28318
Facility's Phone: (910) 567-6138

U.S. EPA ID Number
SRC800035

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	PETROLEUM CONTAMINATED SOIL	01	PT	68440 261000 42340	LBS.	Tech 1060 9.05
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: EUGENE Jones
Signature: Eugene Jones
Month: 2 Day: 6 Year: 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Timothy E. O'Boone
Signature: T.E. O'Boone
Month: 2 Day: 6 Year: 14

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
NC6170022580	1		14018

GENERATOR

5. Generator's Name and Mailing Address
Commanding General MCI East - MCB
12 Post Lane
MCB Camp Lejuene, NC 28547
Generator's Phone: 910 451-9017

Generator's Site Address (if different than mailing address)
MC Airstation New River
AS 705 Flounder Rd.
Camp Lejuene, NC 28542

6. Transporter 1 Company Name
Thurmond Trucking TT21 910-483-0006
U.S. EPA ID Number

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
E S & J ENTERPRISES, INC.
1555 HOLLAND RD. - AUTRYVILLE, NC 28318
Facility's Phone: (910) 567-6138
U.S. EPA ID Number
SR0600035

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	Ticket #1068 1412
1.	PETROLEUM CONTAMINATED SOIL TT2391	01	PT	63900 26100 37800	LBS.	
2.	TT21					
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Ewell Jones
Signature:
Month: 2 Day: 6 Year: 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Timothy E. O'Loane
Signature: T. E. O'Loane
Month: 2 Day: 6 Year: 14

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY'S COPY

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APPENDIX I

RISK CLASSIFICATION AND LAND USE FORM

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Limited Site Assessment Risk Classification and Land Use Form

Part I – Groundwater/Surface Water/Vapor Impacts

High Risk

1. Has the release contaminated any water supply well including any well used for non-drinking purposes? YES/**NO**
2. Is a water supply well used for drinking water located within 1,000 feet of the source area of the release? YES/**NO**
3. Is a water supply well not used for drinking water (e.g., irrigation, washing cars, industrial cooling water, filling swimming pools) located within 250 feet of the source area of the release? YES/**NO**
4. Does groundwater within 500 feet of the source area of the release have the potential for future use (there is no other source of water supply other than the groundwater)? YES/**NO**
5. Do vapors from the release pose a threat of explosion because of accumulation of the vapors in a confined space or pose any other serious threat to public health, public safety or the environment? YES/**NO**
   If yes, describe.
   _____

6. Are there any other factors that would cause the release to pose an imminent danger to public health, public safety, or the environment? YES/**NO**
   If yes, describe.
   _____

Intermediate Risk

7. Is a surface water body located within 500 feet of the source area of the release? **YES**/NO

   Strawhorn Creek is located approximately 280 feet north. The creek flows east and discharges into the New River approximately 900 feet east of UST AS705.

   If **YES**, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B .0200 by a factor of 10? YES/**NO**

8. Is the source area of the release located within an approved or planned wellhead protection area as defined in 42 USC 300h-7(e)? YES/**NO**
   If yes, describe.
   _____

9. Is the release located in the Coastal Plain physiographic region as designated on a map entitled “Geology of North Carolina” published by the Department in 1985? **YES**/NO

If **YES**, is the source area of the release located in an area in which there is recharge to an unconfined or semi-confined deeper aquifer that is being used or may be used as a source of drinking water? If YES, describe. **YES**/NO

The potential source area is located just above the unconfined surficial aquifer. However, the surficial aquifer is not used for the potable water supply at MCB Camp Lejeune. The deeper Castle Hayne aquifer is the water source for potable water treatment facilities.

10. Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels (See Table 2.) established by the Department? YES/**NO**

Part II - Land Use

Property Containing Source Area of Release

The questions below pertain to the property containing the source area of the release.

1. Does the property contain one or more primary or secondary residences (permanent or temporary)? Describe. **YES**/NO

   Building 705, which is about 60 feet south of source area, is used for temporary bachelor officers quarters. Other barracks are located further south and the Officers Club is about 700 feet further east.

2. Does the property contain a school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly? Describe. YES/**NO**

   The Officers Club could be considered a place of assembly for base personnel and guests at MCB Camp Lejeune. However, no school, daycare, park, or place of public assembly is within 2,000 feet of the site.

3. Does the property contain a commercial (e.g., retail, warehouse, office/business space, etc.) or industrial (e.g., manufacturing, utilities, industrial research and development, chemical/petroleum bulk storage, etc.) enterprise, an inactive commercial or industrial enterprise, or is the land undeveloped? Describe. YES/**NO**

   No commercial or industrial activity in the area.

4. Do children visit the property? Explain. YES/**NO**

   Although it could be possible for a child to visit the property, it can be assumed this would not be a regular place for a child to visit.

Is access to the property reliably restricted consistent with its use (e.g., by fences, security personnel or both)? Explain. **YES**/NO

The site is located on MCAS New River which restricts access to base personnel and their families. However, there are no other restrictions to access the site area.

5. Does pavement, buildings, or other structures cap the contaminated soil? YES/**NO**

   Describe. *Only grass and wooded areas to the north and west, paved parking lot to the east, but sampling indicated the eastern extent of contaminated soil did not reach the parking lot.*

   If yes, what mechanisms are in place or can be put into place to ensure that the contaminated soil will remain capped in the foreseeable future?

6. What is the zoning status of the property?

   MCAS New River is not subject to county zoning requirements.

7. Is the use of the property likely to change in the next 20 years? Explain. YES/**NO**

   The current use of the MCAS area is not likely to change in the near future.

Property Surrounding Source Area of Release

The questions below pertain to the area within 1,500 feet of the source area of the release (excludes property containing source area of the release):

1. What is the distance from the source area of the release to the **nearest** primary or secondary residence (permanent or temporary)?

   Building AS705, bachelors quarters is about 50 feet to the south.

2. What is the distance from the source area of the release to the **nearest** school, daycare center, hospital, playground, park, recreation area, church, nursing home or other place of public assembly?

   > 1,500 feet.

3. What is the zoning status of properties in the surrounding area?

   MCAS New River is not subject to county zoning requirements.

4. Briefly characterize the use and activities of the land in the surrounding area.

   As mentioned above, the site is adjacent to the bachelors quarters (AS705).

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