AECOM
10 Patewood Drive
Bldg. VI, Suite 500
Greenville, South Carolina 29615
www.aecom.com

864 234 3000 tel
864 234 3069 fax

January 8, 2015

Ms. Addie Walker, Project Manager
SC Department of Health and Environmental Control
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

Re: Fall 2014 Semi-Annual Groundwater Monitoring Report
Delavan Spray Technologies Site
Bamberg, South Carolina
SCDHEC VCC Number 13-4762-RP
SCDHEC File Number 51778
AECOM Project Number 60314964

Dear Ms. Walker:

On behalf of United Technologies Corporation Aerospace Systems (UTAS), AECOM is providing you one (1) hard copy and one (1) electronic copy of the Fall 2014 Semi-Annual Groundwater Monitoring Report for the Delavan Spray Technologies Site. This report is being submitted to the Department in accordance with The Remedial Investigation Work Plan (Hart & Hickman, August 1, 2013) and voluntary clean-up contract (VCC) number 13-4762-RP, which was signed on July 3, 2013.

If you have any questions or require further information, please feel free to contact me.

Sincerely,

AECOM Technical Services, Inc.

Walter C. Gerald

Walter C. Gerald, P.G.
Project Manager
864-234-8925
walter.gerald@aecom.com

cc: Mr. Bill Penn – United Technologies Corporation
Ms. Evelyn Rogers, PE – AECOM
Project File 60314964

Fall 2014 Semi-Annual Groundwater Monitoring Report

United Technologies Corporation Delavan Spray Technologies Site 4334 Main Highway US Highway 301 South Bamberg, South Carolina

VCC 13-4762-RP

Prepared by:

AECOM Technical Services, Inc.
10 Patewood Drive
Suite 500, Building VI
Greenville, South Carolina

January 8, 2015

FALL 2014 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

UNITED TECHNOLOGIES CORPORATION (UTC)
DELAVAN SPRAY TECHNOLOGIES SITE
BAMBERG, SOUTH CAROLINA

RESPONSIBILITY PARTY VOLUNTARY CLEANUP CONTRACT NUMBER 13-4762

The undersigned certify that they have reviewed the attached document and that the document is in material compliance with the guidelines and requirements of the State of South Carolina and the South Carolina Department of Health and Environmental Control (SCDHEC) and specifically, requirements under the SCDHEC Voluntary Cleanup Contract (VCC). The data presentations contained herein are consistent with generally accepted practices in the environmental profession.

Prepared by:

LESLEE J. ALEXANDER REGISTERED No. 2433 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

Leslee J. Alexander, PG
South Carolina PG No. 2433
AECOM Project Hydrogeologist

January 8, 2015
Date

Reviewed by:

WALTER C. GERALD REGISTERED No. 146 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

Walter C. Gerald, PG
South Carolina PG No. 146
AECOM Project Manager

January 8, 2015
Date

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

AECOM Technical Services, Inc. (AECOM) has prepared this *Fall 2014 Semi-Annual Groundwater Monitoring Report* on behalf of United Technologies Corporation (UTC) for the Delavan Spray Technologies Site (the Site) located at 4334 Main Highway (US Highway 301 South) in Bamberg, South Carolina (Figure 1). The fall 2014 semi-annual groundwater sampling was completed to meet the on-going monitoring requirements of Voluntary Cleanup Contract (VCC) (VCC 13-4762-RP) that was signed between South Carolina Department of Health and Environmental Control (SCDHEC) and Delavan Spray, LLC (SCDHEC, 2013).

This report provides a brief overview of the Site (Section 2.0), describes the sampling activities (Section 3.0), and presented the results (Section 4.0). Conclusions based on the results are discussed in Section 5.0.

2.0 OVERVIEW OF THE SITE

The facility manufactures several types of metal spray nozzles for fuel oils. The Site is comprised of a main manufacturing building and smaller associated support buildings, which are located on approximately 20 acres. A Site layout map is provided as Figure 2.

2.1 Background

Assessment activities were initiated at the Site in 2003, after chlorinated volatile organic compounds (VOCs) were detected in groundwater beneath the Site. The primary compounds of concern were reported to be tetrachloroethene (PCE) and its degradation products trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride (VC).

In 2005, Hart & Hickman, PC (H&H) injected Hydrogen Release Compound® (HRC) into shallow groundwater to stimulate natural biodegradation of chlorinated compounds in groundwater. Post-injection monitoring was conducted by H&H between 2005 and 2007. The results indicated that the HRC injections were effective in reducing concentrations of chlorinated compounds in Site groundwater. However, VOCs remained in the groundwater at these locations at concentrations exceeding the United States Environmental Protection Agency (USEPA) maximum contaminant levels (MCLs) for drinking water.

Between 2007 and 2011, H&H conducted multiple groundwater assessments at the Site and surrounding area to further delineate the horizontal and vertical extent of VOCs detected in groundwater. A semi-annual groundwater monitoring program was also instituted to evaluate any changes to groundwater conditions at the Site.

A source area investigation was completed at the Site in August 2012 to determine the nature and general extent of potential compounds of interest (PCOIs) at the Site. The results of the August 2012 assessment indicated that VOC impacts to soil and groundwater are present at the former PCE UST, and soil VOC impacts are present at both of the former degreaser areas, former northern secondary containment area, and northeastern wooded area. No soil VOC impacts were identified in the northwestern wooded area, and no VOC groundwater impacts were identified at the former northern secondary containment area (H&H, 2012 and 2013).

On July 5, 2013, a VCC between Delavan Spray, LLC and SCDHEC was executed (VCC 13-4762-RP). In accordance with Section 3 of the VCC, a Remedial Investigation (RI) was conducted in February/March 2014 (AECOM, 2014). The RI results provided further delineation of VOCs in soil and groundwater beneath the Site. Furthermore, the RI sampling results were used in conjunction with existing data to complete a Human Health Risk Assessment (HHRA) and an Ecological Risk Assessment.

2.2 Geology

The Site lies within the western portion of the South Carolina Coastal Plain Province, which is characterized as a seaward thickening wedge of sediments from the fall line to the coast. These sediments consist of sands, silts, clays and limestones; representing a variety of non-marine and marine depositional environments.

For the purposes of Site characterization, the Delavan Spray Technologies Site geology has been subdivided into three general geologic zones by previous investigators. The upper zone consists of undifferentiated sands, clayey sands, sandy clays, and silts. In the northern portion of the Site, these sediments tend to contain a higher percentage of clay and silty layers. The middle zone consists of fossiliferous limestone; with a layer of pale yellow poorly cemented coarse shell fragments overlying a layer of white, better cemented limestone containing finer-grained shell fragments. The lower geologic zone is a loose to moderately cemented calcareous fine- to medium-grained clayey sandstone. The relationship of these geologic zones was previously illustrated on generalized cross-sections Figures 4, 5 and 6 of the RI Work Plan (H&H, 2013).

2.3 Hydrogeology

Groundwater occurrence in the Coastal Plain is typically within the intergranular pore spaces of the sands, silts and limestones (primary porosity) and within solution cavities or fractures of indurated sediments (secondary porosity). Primary production of groundwater occurs from within the more permeable units, while lower permeability clay layers typically retard groundwater movement. Recharge for significant aquifers in the Coastal Plain occurs both as transport from up-dip areas, toward the Fall Line, where the sediments are generally exposed at the land surface and as leakage from adjacent aquifer units through lower permeability aquitards.

3.0 GROUNDWATER MONITORING PROCEDURES

Fall 2014 semi-annual sampling activities were completed by AECOM personnel between October 27, 2014 and October 29, 2014. Monitoring activities were conducted in accordance with the procedures described in the *Remedial Investigation Work Plan* (H&H, 2013) and with the sampling plan outlined in the *September 2014 Progress Report* to SCDHEC (AECOM, 2014).

Sampling activities included:

- Groundwater level measurements were collected from all 32 existing monitoring wells;
- Groundwater samples were collected from 27 monitoring wells (indicated by black labels on Figure 2). All 27 samples were submitted for analysis of VOCs and eight (8) samples were submitted for analysis of monitored natural attenuation parameters (MNA); and
- A potable water sample was collected from the public water supply at the faucet in the front parking lot and analyzed for VOCs.

The depth to water in the monitoring wells was measured using an electronic water level meter on October 27, 2014, prior to purging any wells for groundwater sampling. The water levels were used to create potentiometric maps of the aquifer zones discussed in Section 4.1 below.

Monitoring wells were purged using a peristaltic pump and water levels were monitored during purging. Groundwater quality indicator parameters of pH, specific conductance, dissolved oxygen, oxidation-reduction potential, turbidity, and temperature were monitored during the groundwater purging process and recorded on the Field Data Logs for Groundwater Sampling included in Appendix A. Samples were collected once the parameters had stabilized in accordance with the low-flow sampling procedure in the work plan.

One sample was collected from the faucet located in the grassed area south of the employee parking lot. This water source was used as a potable water source during RI monitoring well installation activities. Approximately 1 gallon was purged from the faucet and groundwater quality readings were collected prior to sample collection. Sample information was recorded on a Field Data Log for Groundwater Sampling and is included in Appendix A.

Upon collection, all groundwater and potable water samples were labeled, preserved on ice and kept under chain-of-custody protocol until received at the subcontract analytical laboratory. Chain-of-custody forms are included in Appendix A.

The groundwater samples and the potable water sample were analyzed for VOCs by USEPA method 8260. Samples from monitoring wells MW-5, MW-8, MW-14, MW-19, MW-20, MW-21, MW-21D, and

MW-22D were also analyzed for ethane, ethene, and methane by USEPA method RSK 147, chloride, nitrate, nitrite, and sulfate by USEPA method 9056, and total organic carbon by USEPA method 5310. Water samples were analyzed by Accutest Laboratories, located in Orlando, Florida, a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and state of South Carolina certified laboratory. Laboratory analytical data packages are provided in Appendix B.

4.0 RESULTS

4.1 Groundwater Flow

Water level measurements were collected on October 27, 2014 and are summarized on Table 1 along with their corresponding groundwater elevations. Groundwater elevations measured in wells completed in the shallow aquifer zone were used to create a water-table surface map (Figure 3). The October 2014 water levels within the shallow aquifer zone occur between approximately 131 to 137 feet in elevation. Although water levels were approximately three to four feet lower than those measured during the RI (February 2014), similar flow patterns were observed. The equal potential lines indicate groundwater flow beneath the northern portion of the Facility varies between northward and southward flow directions, with local groundwater highs at MW-4 and MW-6. Groundwater levels appear depressed at MW-8 and MW-21. This phenomenon was previously recognized in the RI Work Plan (H&H, 2013) and characterized as a “groundwater trough”, a feature that has been observed to extend to MW-9 during previous field investigation efforts. A local groundwater low observed at newly installed well MW-18 during the RI is also aligned with the “groundwater trough”. The variances in groundwater elevation and flow directions in this portion of the Site could be the result of preferential flow pathways resulting from higher permeability zones due to local facies changes or induced drainage from the sanitary sewer line or incised drainage ditch, which forms the northern boundary of the Facility. However, the primary horizontal groundwater flow direction is inferred to be toward the west, toward Halfmoon Branch, which is consistent with findings from prior investigations conducted at the Site.

Based on the October 2014 water level elevations within the deeper limestone aquifer zone, the potentiometric surface occurs between approximately 131.5 and 132.5 feet in elevation (Figure 4). Groundwater elevations in October 2014 were approximately two feet lower and result in a flatter gradient than those measured during the RI (February/March 2014). From the equal potential lines, the inferred direction of horizontal groundwater flow is to the south-southwest and is consistent with regional topography, drainage and findings from prior investigations conducted at the Site.

4.2 Groundwater Quality

Groundwater quality indicator parameters, including pH, specific conductance, dissolved oxygen and oxidation-reduction potential are measured in the field during the well purging and sampling process. A summary of the groundwater quality indicator parameters is presented in Table 2. The groundwater sampling logs are included in Appendix A and the analytical results are summarized in Table 3

Shallow Aquifer Zone

VOCs

In the 15 groundwater samples collected from shallow aquifer zone groundwater during the fall 2014 semi-annual monitoring, eight VOCs [1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-DCE, trans-1,2-DCE, PCE, TCE and VC) were detected (Table 3). Five of these compounds, (PCE, TCE, cis-1,2-DCE, VC, and 1,1-DCE) exceeded their respective MCLs in one or more samples of shallow groundwater.

PCE was the most frequently detected VOC in shallow aquifer zone groundwater samples (10 detections) and groundwater concentrations exceeded the MCL in shallow monitoring wells MW-1, MW-3, MW-8, MW-9, MW-10, MW-19, MW-20, and MW-21 (Figure 5). The highest concentrations were detected adjacent to the Former PCE UST at MW-21 [14,500 micrograms per liter (µg/L)] and at the northern-most Former PCE Degreaser in MW-19 (3,470 µg/L). Elevated but lower concentrations of PCE were detected in shallow aquifer groundwater in MW-9 (727µg/L) and MW-10 (136 µg/L) in the Northern Wooded Areas of Interest. Detected TCE concentrations that exceeded the MCL exhibit a similar pattern as PCE, but occur across a smaller footprint (Figure 6). TCE concentrations exceeded the MCL in four groundwater samples (MW-1, MW-9, MW-10, and MW-21), and the highest concentrations of TCE were detected at MW-21 (354 µg/L) and MW-9 (159 µg/L).

Cis-1,2-DCE was detected less frequently (4 detections) and exceeded the MCL each time it was detected (131 µg/L at MW-1, 92.2 µg/L at MW-9, 664 µg/L at MW-10, and 733 µg/L at MW-21) (Figure 7). VC was detected in one sample (MW-1) at a concentration (10.9 J µg/L) that exceeded its MCL (Figure 8). The detections of both cis-1,2-DCE and VC in the shallow aquifer correspond to “hot-spots” of PCE and TCE.

1,1-DCE was detected in three shallow aquifer zone groundwater samples, and detected concentrations exceeded the MCL at two locations (Figure 9). The highest concentrations of 1,1-DCE were detected in samples from MW-19 (12 J µg/L) near the northern-most Former PCE Degreaser and MW-10 (32.7 µg/L) in the Northern Wooded Area of Interest.

There were no exceedances of VOC MCLs in groundwater samples collected from off-Site wells screened in the shallow aquifer zone.

MNA Parameters

Six shallow wells (MW-5, MW-8, MW-14, MW-19, MW-20, and MW-21) were sampled for MNA parameters including TOC, chloride, nitrate, nitrite, sulfate, methane, ethane, and ethene and the results are summarized on Table 3.

The range of MNA parameter values detected in October 2014 samples and select indicator parameters are summarized in the inset table below, along with their optimal ranges for anaerobic biodegradation based on USEPA guidance (1998). Based on this information, nitrate, sulfate, and methane concentrations are favorable for anaerobic degradation in the shallow aquifer zone. However, low pH and TOC levels, and limited areas with favorable dissolved oxygen concentrations, may inhibit natural degradation of chlorinated VOCs. Furthermore, although daughter products of PCE (i.e., TCE and cis-1,2-DCE) have been detected, ethane and ethene (the ultimate degradation end products) were not detected in the samples from the shallow aquifer groundwater.

Analysis	Minimum	Maximum	Average	Optimal Range for Anaerobic Biodegradation Processes*
pH (S.U.)	4.11	4.53	4.34	5 < pH < 9 - Optimal range for reductive pathway 5 > pH >9 - Outside optimal range for reductive pathway
Dissolved Oxygen (mg/L)	0.49	5.69	2.64	<0.5 mg/L - Tolerated, suppresses the reductive pathway at higher concentrations >5 mg/L - Not tolerated; however, VC may be oxidized aerobically
ORP (mV)	-37.4	386.8	244.2	<50 millivolts (mV) - Reductive pathway possible <-100mV - Reductive pathway likely
Chloride (µg/L)	930	29,000	8,546	>2X background - Daughter product of organic chlorine
Nitrate (µg/L)	90	3,600	1,528	<1,000 µg/L - At higher concentrations may compete with reductive pathway
Nitrite (µg/L)	ND	50	-	
Sulfate (µg/L)	2,100	8,100	4,250	<20,000 µg/L - At higher concentrations may compete with reductive pathway
TOC (µg/L)	230	1,200	578	>20,000 µg/L - Carbon and energy source; drives dechlorination; can be natural or anthropogenic
Methane (µg/L)	ND	82.6	-	<500 µg/L - VC oxidizes >500 µg/L - Ultimate reductive daughter product, VC Accumulates
Ethane (µg/L)	ND	ND	ND	>10 µg/L - Daughter product of VC/ethene
Ethene (µg/L)	ND	ND	ND	>10 µg/L - Daughter product of VC/ethene

* - from the *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* (USEPA, 1998).
ND - not detected

Deeper Aquifer Zone

VOCs

Twelve groundwater samples collected from deeper aquifer zone groundwater during the fall 2014 monitoring event, resulting in five VOCs (1,1,1-TCA, 1,1-DCE, cis-1,2-DCE, PCE and TCE) that were detected in one or more samples (Table 3). Of these compounds, only PCE and 1,1,-DCE exceeded their respective MCLs.

PCE was detected in six deeper aquifer zone groundwater samples (MW-3D, MW-12D, MW-13D, MW-14D, MW-21D, and MW-22D) and groundwater concentrations exceeded the MCL in five of these samples (Figure 10). Detected PCE concentrations were highest in the deeper limestone aquifer down-gradient from the Former PCE Secondary Containment Area (384 µg/L at MW-3D). PCE concentrations exceeded the MCL in off-Site down-gradient wells MW-14D (79.3 µg/L) and MW-22D (149 µg/L), and the

PCE plume is not fully delineated in the down-gradient (south/southwest) direction. TCE concentrations were detected in three samples from the deeper aquifer zone, but only none of the detected concentrations exceeded the MCL (Figure 11). TCE was also detected in off-Site down-gradient wells MW-14D and MW-22D, but at low, estimated concentrations below the MCL.

Cis-1,2-DCE was detected in three samples from deeper aquifer zone groundwater during the fall 2014 monitoring event (MW-3D, MW-14D, and MW-22D), but none of the detected concentrations exceeded the MCL for cis-1,2-DCE (Figure 12). VC was not detected in any deeper aquifer zone groundwater sample in October 2014 (Figure 13). The detected concentration of 1,1-DCE (16.2 µg/L) in the sample from MW-3D exceeded the MCL and 1,1-DCE was detected below the MCL at on-Site wells MW-13D and MW-21D and off-Site wells MW-14D and MW-22D (Figure 14).

Other than PCE, the groundwater contaminant plumes in the deeper aquifer are delineated off-Site by non-detects or concentrations below their respective MCLs.

There were no detections of VOCs in deep sandstone aquifer groundwater samples collected (MW-3D1 and MW-15D1).

MNA Parameters

Groundwater indicator parameters were collected at all deeper aquifer monitoring wells during groundwater sampling activities and are summarized on Table 2. Two deeper wells (MW-21D and MW-22D) were also sampled for MNA parameters, including: TOC, chloride, nitrate, nitrite, sulfate, methane, ethane, and ethene in accordance with the *RI Work Plan* (H&H, 2013) and the results are summarized on Table 3.

The range of MNA parameter values detected in October 2014 and select indicator parameters are summarized in the inset table below, along with their optimal ranges for anaerobic biodegradation based on USEPA guidance (1998). Based on this information, sulfate, nitrate, and methane concentrations are favorable for anaerobic degradation in the deeper aquifer zone. Measured pH values were also favorable in all deeper aquifer monitoring wells except MW-12D and MW-22D. However, TOC levels and limited areas with favorable dissolved oxygen concentrations and ORP levels, may inhibit degradation. Furthermore, although daughter products of PCE (i.e., TCE and cis-1,2-DCE) have been detected, ethane and ethene (the ultimate degradation end products) were not detected in the samples from the deeper aquifer groundwater.

Analysis	Minimum	Maximum	Average	Optimal Range for Anaerobic Biodegradation Processes*
pH (S.U.)	7.11	11.08	8.03	5 < pH < 9 - Optimal range for reductive pathway 5 > pH >9 - Outside optimal range for reductive pathway
Dissolved Oxygen (mg/L)	0.21	4.82	2.26	<0.5 mg/L - Tolerated, suppresses the reductive pathway at higher concentrations >5 mg/L - Not tolerated; however, VC may be oxidized aerobically
ORP (mV)	-155.6	649.1	104.9	<50 millivolts (mV) - Reductive pathway possible <-100mV - Reductive pathway likely
Chloride (µg/L)	3,300	8,500	5,900	>2X background - Daughter product of organic chlorine
Nitrate (µg/L)	ND	820	-	<1,000 µg/L - At higher concentrations may compete with reductive pathway
Nitrite (µg/L)	ND	260	-	
Sulfate (µg/L)	2,800	5,500	4,150	<20,000 µg/L - At higher concentrations may compete with reductive pathway
TOC (µg/L)	ND	1,000	-	>20,000 µg/L - Carbon and energy source; drives dechlorination; can be natural or anthropogenic
Methane (µg/L)	ND	0.77	-	<500 µg/L - VC oxidizes >500 µg/L - Ultimate reductive daughter product, VC Accumulates
Ethane (µg/L)	ND	ND	ND	>10 µg/L - Daughter product of VC/ethene
Ethene (µg/L)	ND	ND	ND	>10 µg/L - Daughter product of VC/ethene

* - from the *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* (USEPA, 1998).
ND - not detected

4.3 Potable Water Quality

During the RI, chloroform was detected at concentrations greater than its MCL in two newly installed, deeper aquifer monitoring wells, MW-21D and MW-22D. These wells were drilled using water-based drilling methods and the potable water was obtained from the faucet in the front parking lot. Elevated concentrations of chloroform were not detected in the shallow aquifer up-gradient of these monitoring wells, and chloroform does not appear to be related to past Site activities. However, chloroform is a trihalomethane and a known disinfection byproduct in potable water supplies.

Due to the high permeability of the limestone aquifer at MW-21D, the driller experienced problems with lost-circulation during monitoring wells installation. Excess quantities of potable water were utilized during drilling at MW-21D due to this problem. In order to help evaluate if the elevated concentrations of chloroform in RI samples from MW-21D and MW-22D were related to the well installation activities, a potable sample was collected during the fall 2014 monitoring event from the potable water source in the front parking lot that was used during drilling at MW-21D and MW-22D.

The results for VOC analysis of the potable sample are summarized in Table 4. Chloroform was the only compound detected in the potable water sample, but it was detected at an estimated concentration (0.9 J µg/L) that was less than the MCL.

Chloroform was not detected in MW-21D and MW-22D, or any other Site monitoring wells, during fall 2014 groundwater monitoring. Furthermore, chloroform has not been detected in monitoring wells on- or off-Site during previous investigation activities. Based on this information, the isolated detections of

chloroform in RI groundwater samples from MW-21D and MW-22D are not Site-related and are likely related to monitoring well installation activities.

4.4 Investigation Derived Waste

One drum of investigation-derived waste (IDW) purge and decontamination water was generated during the semi-annual sampling activities and is documented on the IDW management form in Appendix A. One composite IDW water samples was collected from the drum for analysis of VOCs by USEPA method 8260B, semi-volatile organic compounds (SVOCs) by USEPA method 8270D, and metals by USEPA methods 6010C and 7470B. IDW sample results were screened against maximum concentration for the Toxicity Characteristic listed in Code of Federal Regulations (40CFR§261.24). The results are summarized in Table 5. These results were used to generate waste profiles and identify appropriate disposal options for the IDW with a UTC-approved disposal Facility. UTC Delavan Spray Technologies Site personnel are handling the disposal of IDW generated during the semi-annual monitoring event.

4.5 Quality Assurance / Quality Control

The analytical data (Appendix B) associated with the semi-annual sampling were validated in accordance with the procedures outlined in the Work Plan (H&H, 2013). QA/QC Sample results are presented in Table 6 and data qualifiers added to the analytical data as a result of the validation process are defined in Table 7. The DARs (Appendix B) explain data qualifiers added to the sample results as a result of the validation process. As fully described in the DARs, the results for several compounds were rejected:

- In analytical data package FA19534 - Non-detections of the SVOCs benzoic acid, 4-nitrophenol, and phenol in samples associated with preparatory batch ST713 (sample IDW) were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (8, 24, and 23%, respectively). These qualifiers indicate the non-detections are biased low and should be rejected.

These rejected compounds have not been used at the Site and therefore, these data flags should not have any impact on the semi-annual data. The remaining data associated with this sampling event should be considered compliant and adequate for its intended use.

Per the work plan, QA/QC samples collected include field duplicate samples, trip blank samples, and matrix spike/matrix spike duplicate (MS/MSD) samples. The results of these samples are discussed in the following sections. All duplicate, MS/MSD, and trip blank samples were analyzed by Accutest Laboratories located in Orlando, Florida.

Field Duplicates

Duplicate samples, designated with an "-A" suffix, were collected at the frequency of one per ten primary samples for groundwater samples. The results of the primary and field duplicate groundwater samples are provided in Table 6. There were no instances of the relative percent difference (RPD) between the primary and field duplicate samples exceeding the established criteria as defined in the Work Plan (H&H, 2013).

Trip Blanks

Trip blank samples, designated with a "-C" suffix, were submitted daily for coolers containing an aqueous sample for the analysis of VOCs. The results of the trip blank samples are provided in Table 6. There were no analytes detected in trip blank samples and, therefore, no flags were added to primary samples in Table 3 based on the trip blank analyses.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

MS/MSD samples were collected at a frequency of one per twenty primary samples; however, these results were not tabulated as the information only pertains to the primary sample it is associated with. Primary sample results were marked with an "M/m" flag in Table 3 if the percent recovery in the associated matrix spike sample was outside the established criteria. The flags related to the MS/MSD results are defined in Table 7 and results associated with the MS/MSD samples are explained in the DARs included as Appendix B.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are submitted based on the evaluation of the fall 2014 semi-annual monitoring results and a limited comparison to RI sampling results:

- Groundwater levels in the shallow and deeper aquifer zones were two to four feet lower than those measured during the RI. However, the shape of the potentiometric surfaces and groundwater flow patterns in both the shallow and deeper aquifer zones are similar to those observed in the RI and previous investigations.
- Concentrations of VOCs in the shallow aquifer are delineated on-site, with no VOC constituents of concern (COC) detections in shallow off-site monitoring wells.
- With the exception of PCE, VOCs are delineated in deeper aquifer groundwater. PCE is the only VOC detected off-site in deeper aquifer groundwater and it is not completely delineated south-southwest of MW-22D.
- Detected concentrations of PCE under the manufacturing building near the Former PCE Degreasers (i.e., in the vicinity of MW-19, MW-20, and MW-21) and immediately down-gradient of the building (i.e., MW-21D) were lower in October 2014 than those detected during the RI (February/March 2014). For example, the detected concentration in MW-19 dropped from 14,000 µg/L during the RI to 3,470 µg/L in October 2014 and, the detected concentration in MW-21 dropped from 16,300 µg/L 14,500 µg/L, and the detected concentration in MW-21D dropped from 283 µg/L to 2 µg/L.
- Detected concentrations of some PCE degradations products (i.e., TCE, cis-1.2-DCE, and VC) were higher in some October 2014 samples than those detected in the RI. For example, TCE was detected at a concentration of 209 µg/L at MW-21 during the RI and 354 µg/L in October 2014. The detected concentration of cis-1,2-DCE was 466 µg/L during the RI and 733 µg/L in October 2014.
- The isolated detections of chloroform in RI groundwater samples from MW-21D and MW-22D are not Site-related and are likely related to monitoring well installation activities.

Based on the data collected and reviewed since the RI, water levels and groundwater VOC concentrations fluctuate over time in some areas. It is unclear yet whether there is a relationship between water levels and concentrations detected in groundwater, or if seasonal variability in concentrations occurs at the Site. The creation of daughter products (i.e., TCE, cis,1,2-DCE, and vinyl chloride) may be partially responsible for the observed decrease in PCE. It is also possible that the decrease in PCE concentrations can be attributed to the decline in water levels resulting in less contact of groundwater with residual source material in the vadose zone. This would lead to less leaching of PCE into the shallow aquifer. The data, however, are insufficient to determine the cause of these observations at this time, but it is recommended that groundwater levels be evaluated in conjunction with groundwater VOC concentrations once sufficient data have been collected to establish trends.

In accordance with the monitoring requirement of the VCC, the next semi-annual sampling event is expected to occur in April 2015. A sampling schedule with a list of wells and analytes to be sampled will be provided to SCDHEC prior to the event and will be based on the results collected thus far.

6.0 REFERENCES

AECOM, July 3, 2014. Remedial Investigation Report, United Technologies Corporation, Delavan Spray Technologies Site, 4334 Main Highway, Bamberg, South Carolina.

AECOM, October 10, 2014. *September 2014 Progress Report, Delavan Spray Technologies Site, Bamberg, South Carolina*. Letter to Ms. Addie Walker, Bureau of Land and Waste Management, SCDHEC.

H&H, August 29, 2003, Ground water assessment report, Delavan Spray Technologies Facility, Bamberg, South Carolina.

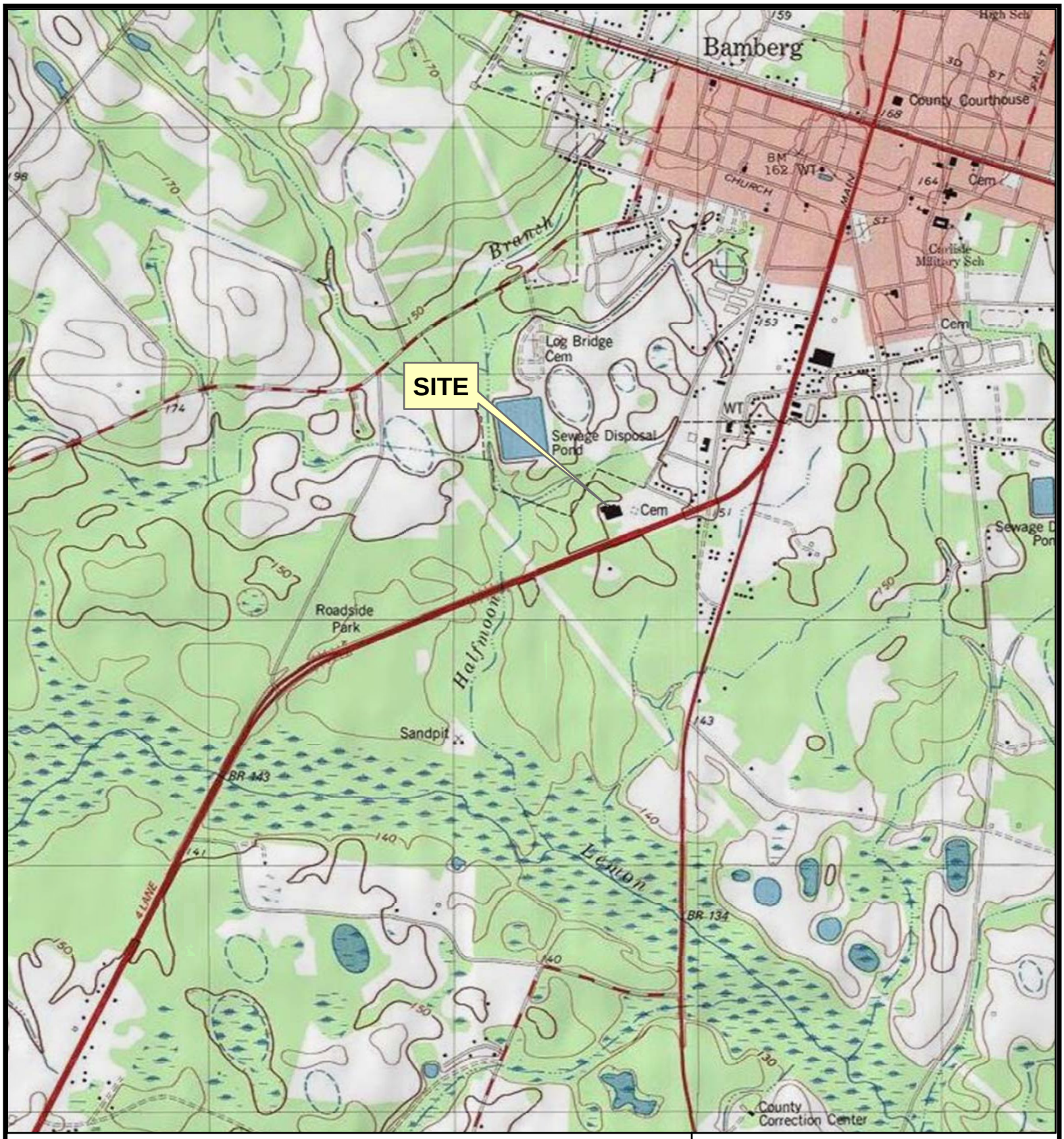
H&H, December 5, 2012, Supplemental Site Assessment Report, Delavan Spray Technologies Site, Bamberg, South Carolina.

H&H, August 1, 2013, Remedial Investigation Work Plan, Delavan Spray Technologies Site, Bamberg, South Carolina.

SCDHEC, July 3, 2013. Voluntary Cleanup Contract 13-4762-RP.

USEPA, 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water.*

FIGURES



N

0 500 1,000 2,000 3,000 4,000
Feet

U.S.G.S. QUADRANGLE MAP

BAMBERG, SC 1979 (PHOTO REVISED 1987)

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

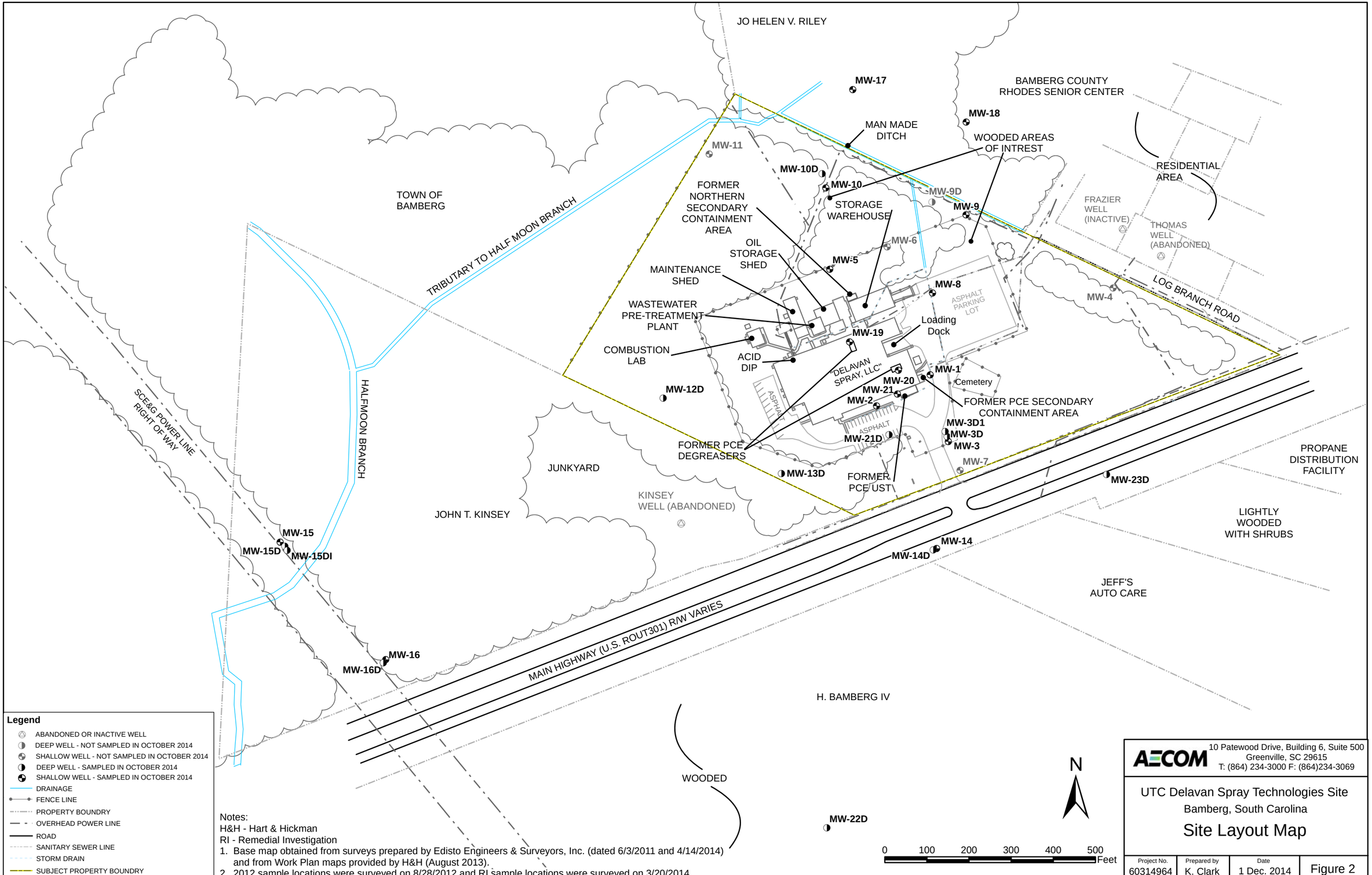
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

Site Location Map

Project No.	Prepared by	Date	
60314964	K. Clark	1 Dec. 2014	Figure 1

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 1 Site Location MapVx10.mxd



Notes:
H&H - Hart & Hickman
RI - Remedial Investigation
1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. (dated 6/3/2011 and 4/14/2014) and from Work Plan maps provided by H&H (August 2013).
2. 2012 sample locations were surveyed on 8/28/2012 and RI sample locations were surveyed on 3/20/2014.

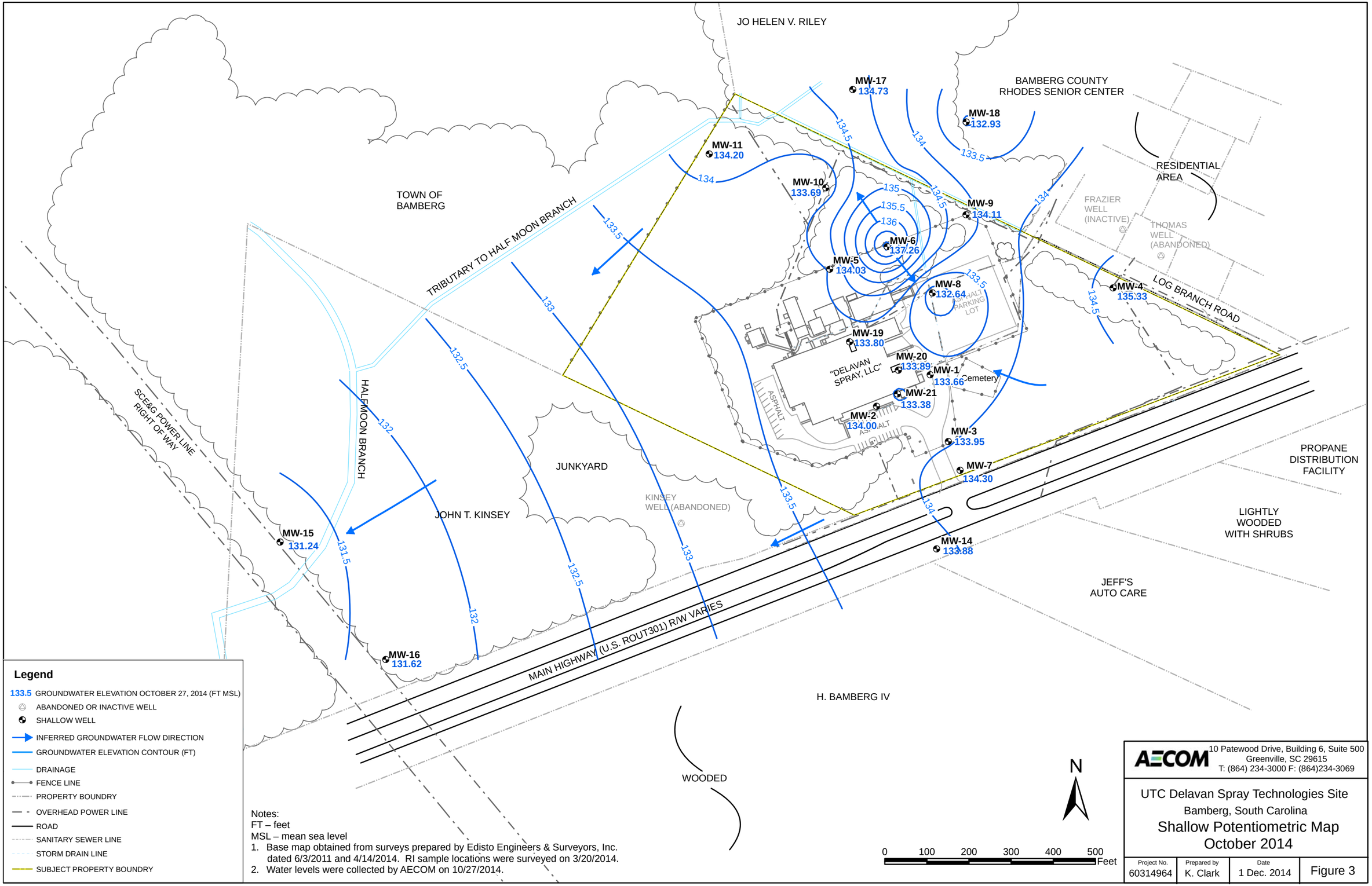
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

Site Layout Map

Project No.	Prepared by	Date	
60314964	K. Clark	1 Dec. 2014	Figure 2

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 2 site layoutVs10.mxd



Legend

- 133.5 GROUNDWATER ELEVATION OCTOBER 27, 2014 (FT MSL)
- ABANDONED OR INACTIVE WELL
- SHALLOW WELL
- INFERRED GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR (FT)
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

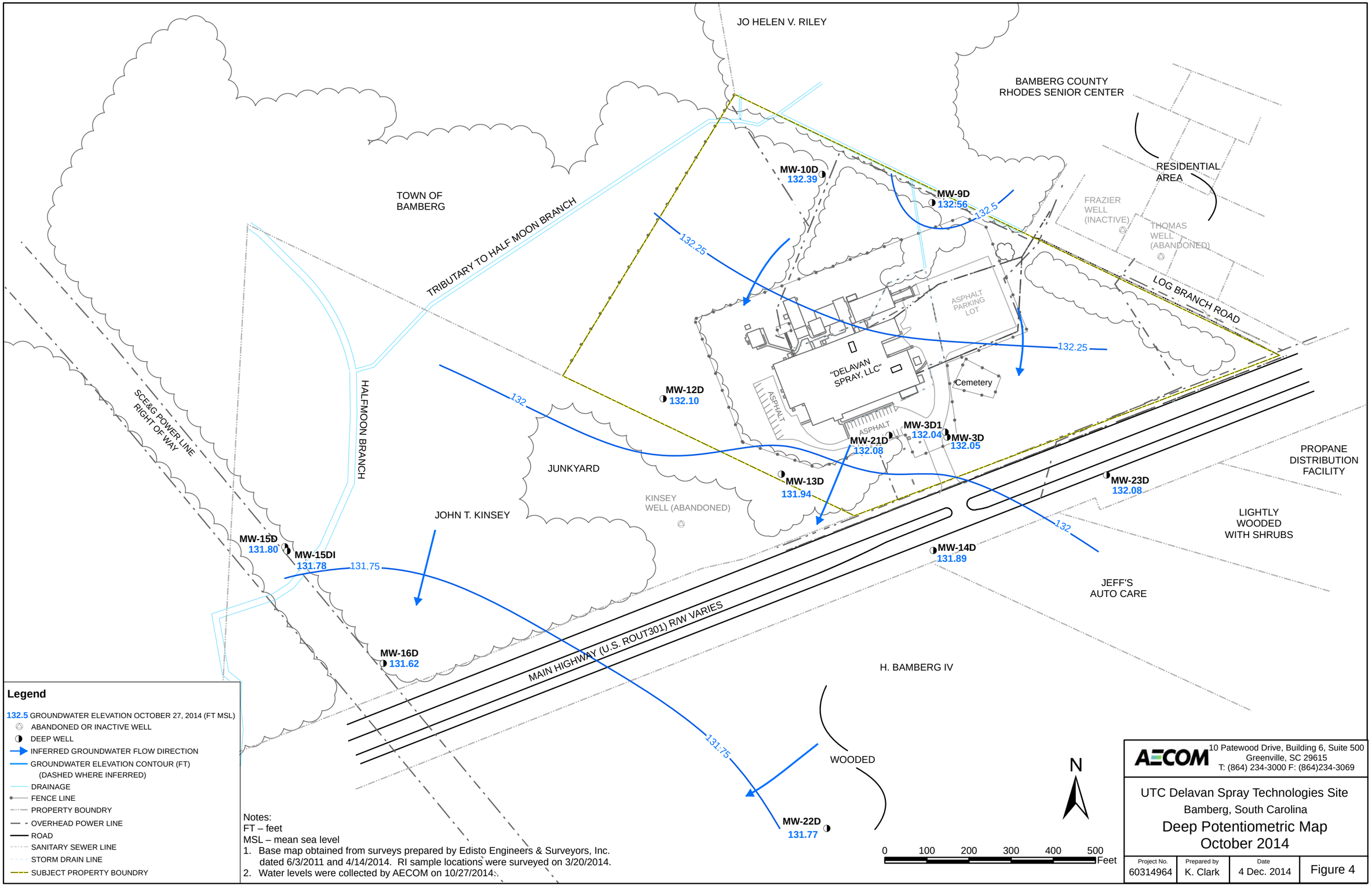
Notes:
FT – feet
MSL – mean sea level
1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Water levels were collected by AECOM on 10/27/2014.

AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina
Shallow Potentiometric Map
October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	1 Dec. 2014	Figure 3

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 3 ShallowPotVs10.mxd



Legend

- 132.5 GROUNDWATER ELEVATION OCTOBER 27, 2014 (FT MSL)
- ABANDONED OR INACTIVE WELL
- DEEP WELL
- INFERRED GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR (FT) (DASHED WHERE INFERRED)
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

Notes:
FT – feet
MSL – mean sea level
1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Water levels were collected by AECOM on 10/27/2014.

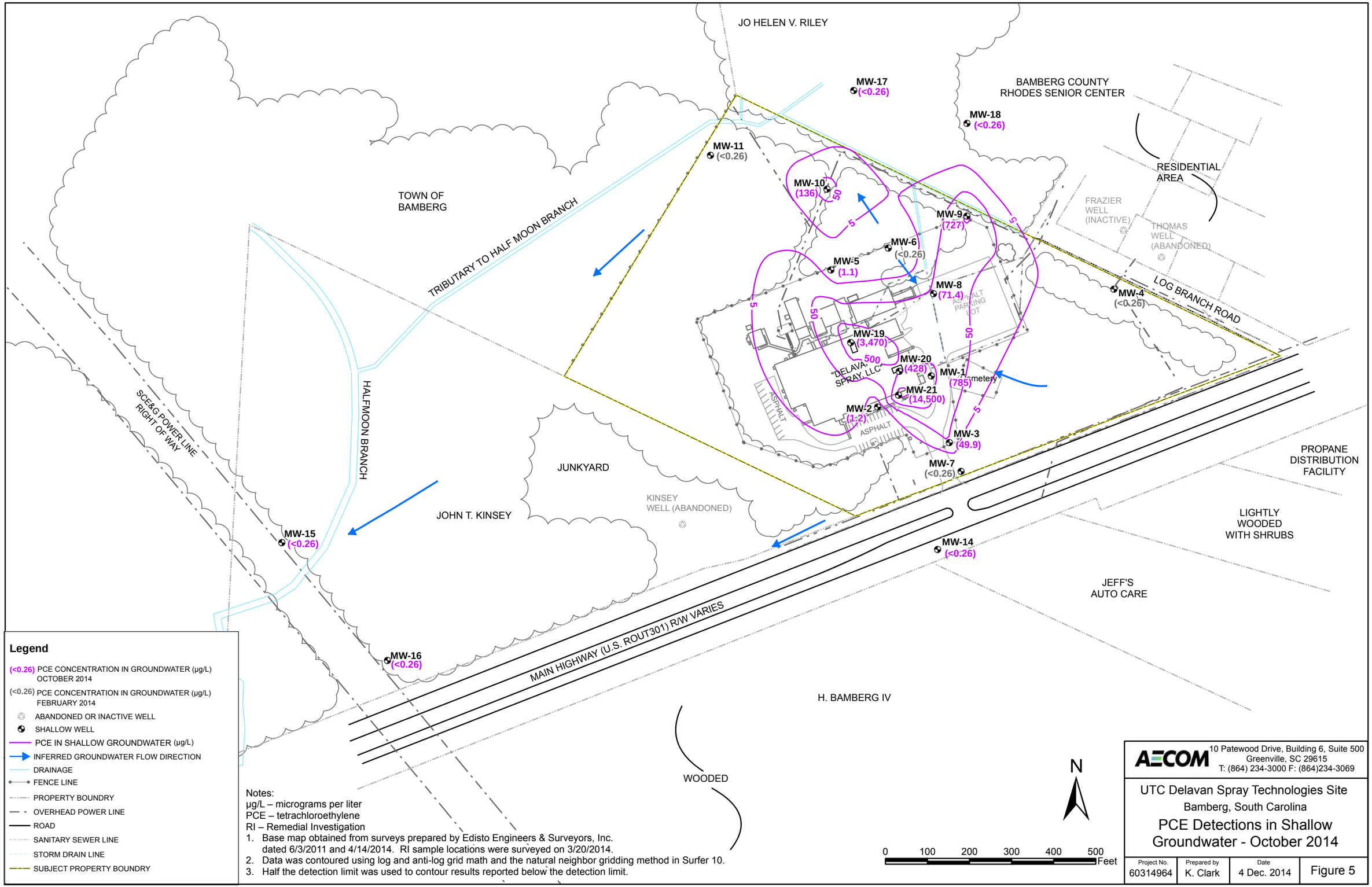
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

Deep Potentiometric Map October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 4

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 4 DeepPotVs10.mxd



Legend

- (<0.26) PCE CONCENTRATION IN GROUNDWATER (µg/L) OCTOBER 2014
- (<0.26) PCE CONCENTRATION IN GROUNDWATER (µg/L) FEBRUARY 2014
- ABANDONED OR INACTIVE WELL
- SHALLOW WELL
- PCE IN SHALLOW GROUNDWATER (µg/L)
- INFERRED GROUNDWATER FLOW DIRECTION
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
PCE – tetrachloroethylene
RI – Remedial Investigation
1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.

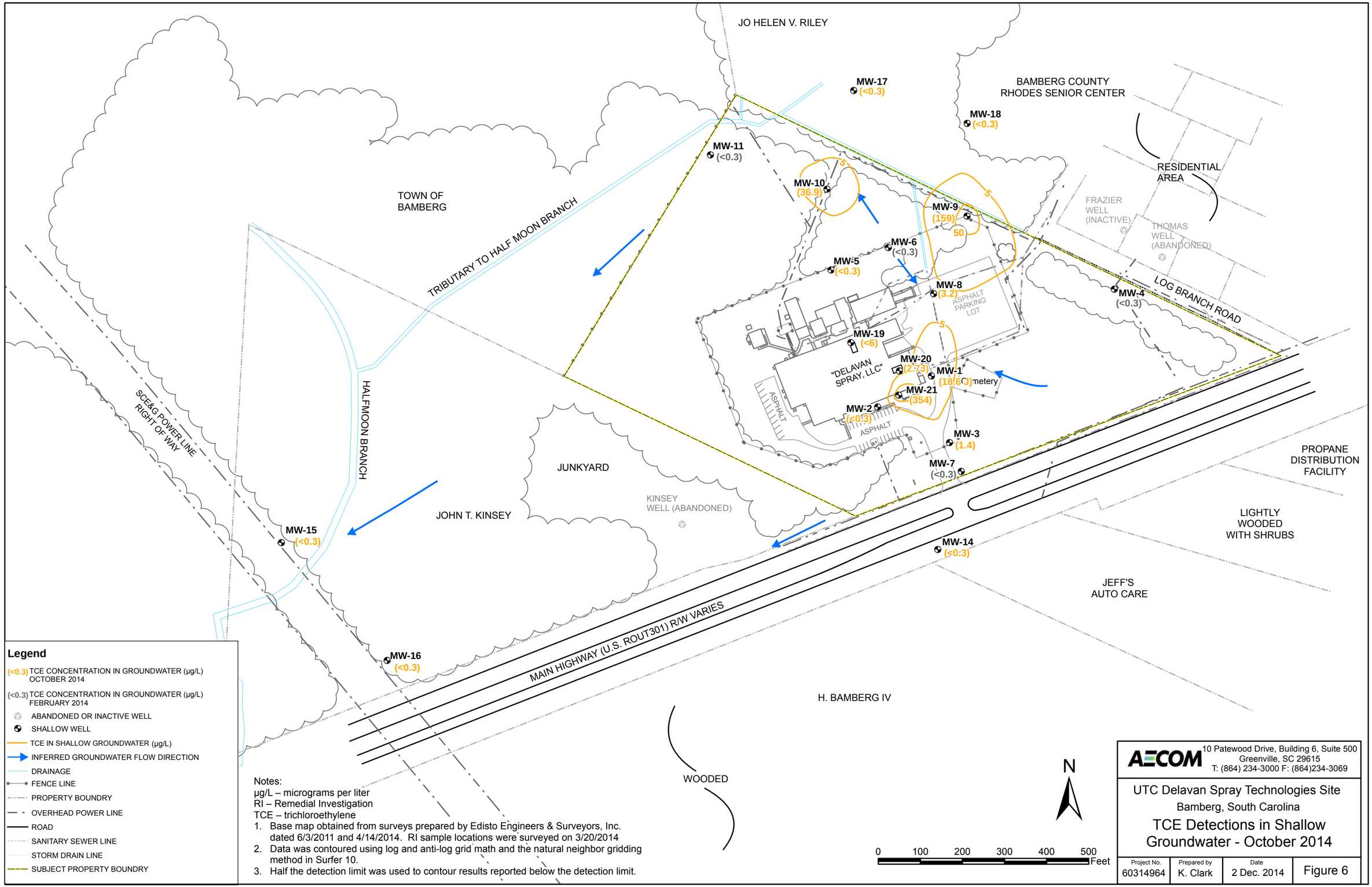
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

PCE Detections in Shallow Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 5

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5 ShallowPCEVs10.mxd



Legend

(<0.3) TCE CONCENTRATION IN GROUNDWATER (µg/L) OCTOBER 2014

(<0.3) TCE CONCENTRATION IN GROUNDWATER (µg/L) FEBRUARY 2014

ABANDONED OR INACTIVE WELL

SHALLOW WELL

TCE IN SHALLOW GROUNDWATER (µg/L)

INFERRED GROUNDWATER FLOW DIRECTION

DRAINAGE

FENCE LINE

PROPERTY BOUNDRY

OVERHEAD POWER LINE

ROAD

SANITARY SEWER LINE

STORM DRAIN LINE

SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
RI – Remedial Investigation
TCE – trichloroethylene

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.

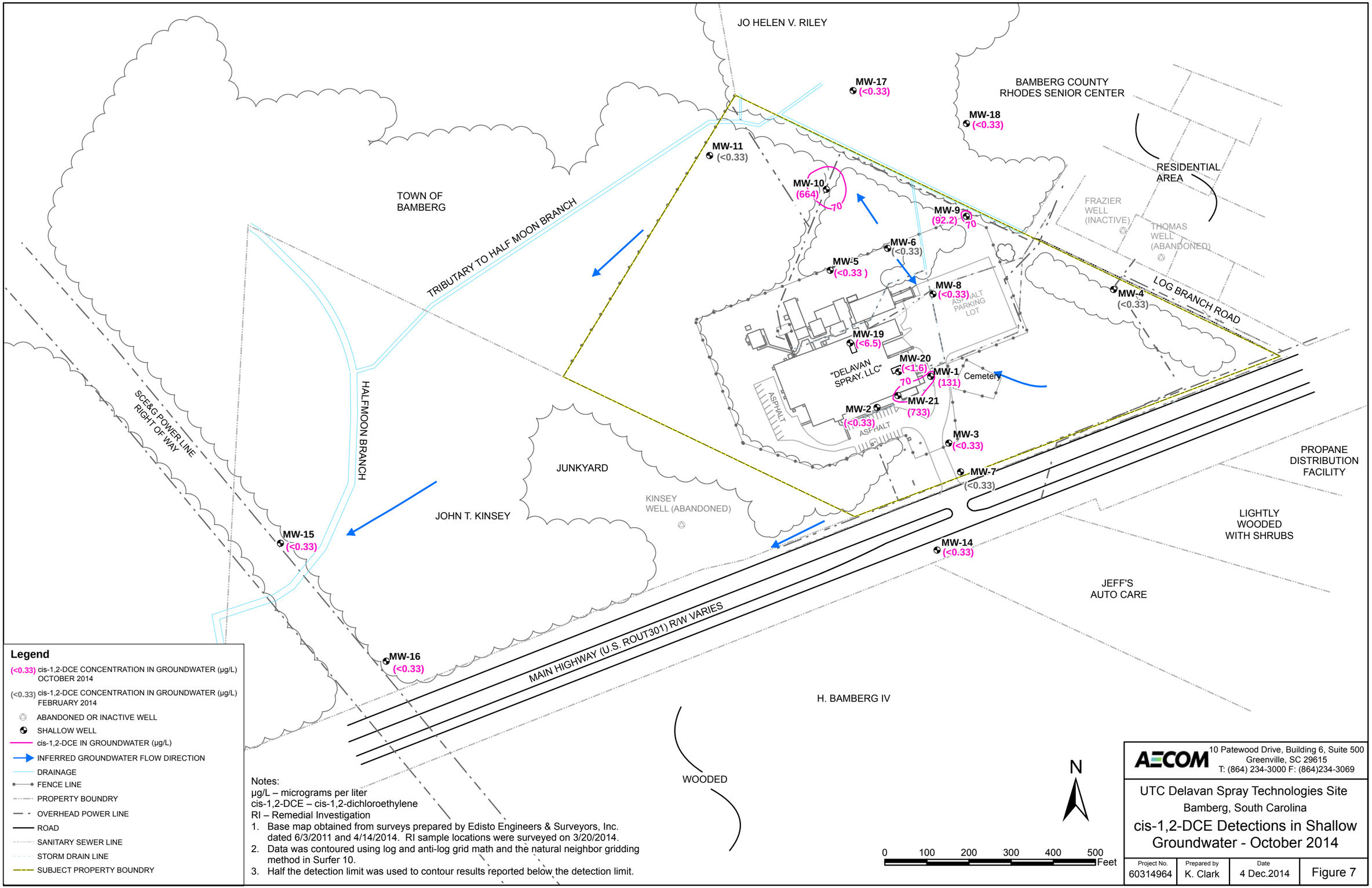
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

TCE Detections in Shallow Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	2 Dec. 2014	Figure 6

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 6 ShallowTCEVs10.mxd



Legend

- (<0.33) cis-1,2-DCE CONCENTRATION IN GROUNDWATER (µg/L) OCTOBER 2014
- (<0.33) cis-1,2-DCE CONCENTRATION IN GROUNDWATER (µg/L) FEBRUARY 2014
- ABANDONED OR INACTIVE WELL
- SHALLOW WELL
- cis-1,2-DCE IN GROUNDWATER (µg/L)
- INFERRED GROUNDWATER FLOW DIRECTION
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
cis-1,2-DCE – cis-1,2-dichloroethylene
RI – Remedial Investigation

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.

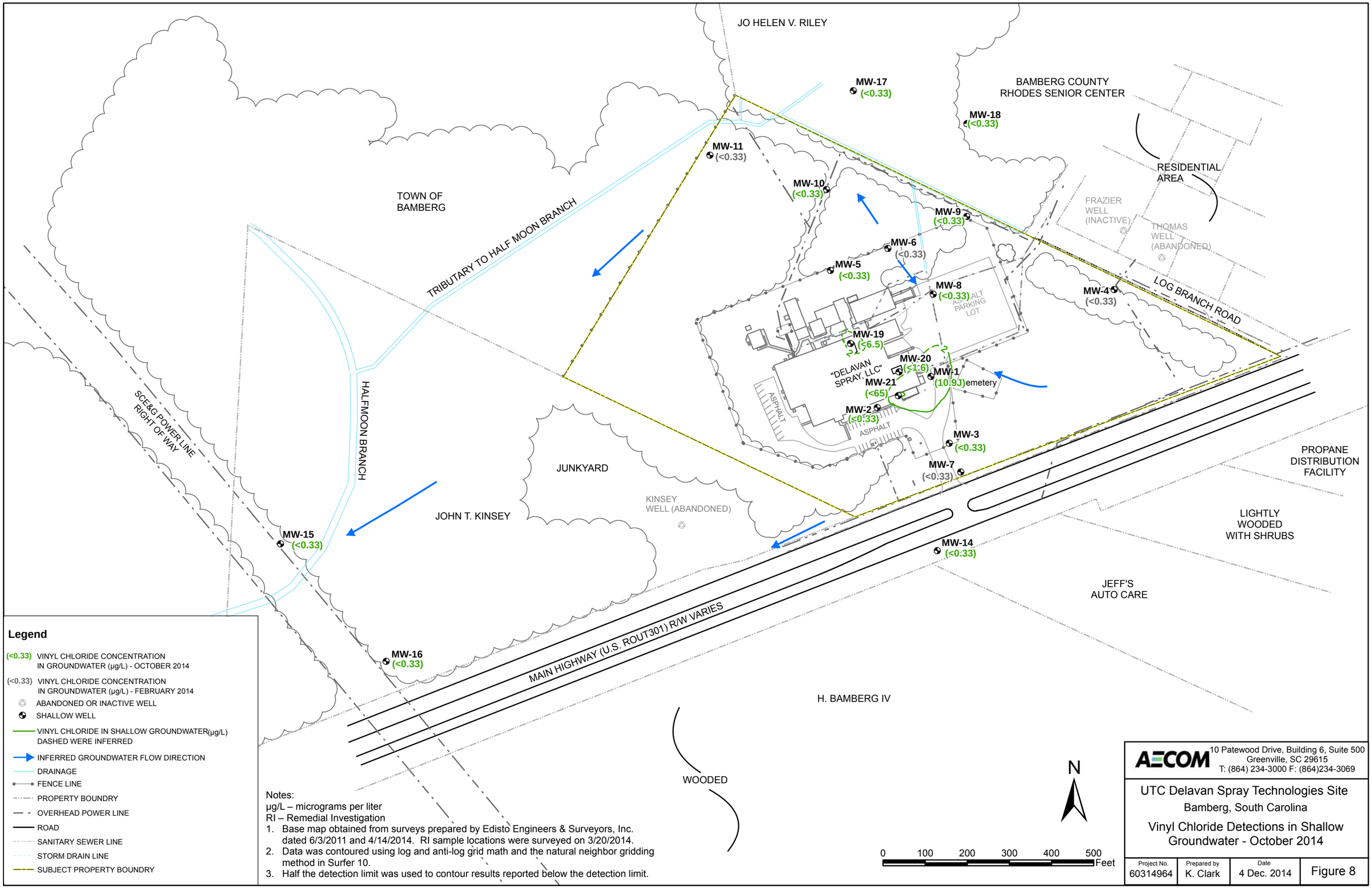
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

cis-1,2-DCE Detections in Shallow Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec.2014	Figure 7

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 7 Shallow cis-1,2-DCE Vs10.mxd



Legend

(<0.33) VINYL CHLORIDE CONCENTRATION IN GROUNDWATER (µg/L) - OCTOBER 2014

(<0.33) VINYL CHLORIDE CONCENTRATION IN GROUNDWATER (µg/L) - FEBRUARY 2014

ABANDONED OR INACTIVE WELL

SHALLOW WELL

VINYL CHLORIDE IN SHALLOW GROUNDWATER(µg/L) DASHED WERE INFERRED

INFERRED GROUNDWATER FLOW DIRECTION

DRAINAGE

FENCE LINE

PROPERTY BOUNDRY

OVERHEAD POWER LINE

ROAD

SANITARY SEWER LINE

STORM DRAIN LINE

SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
RI – Remedial Investigation
1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.

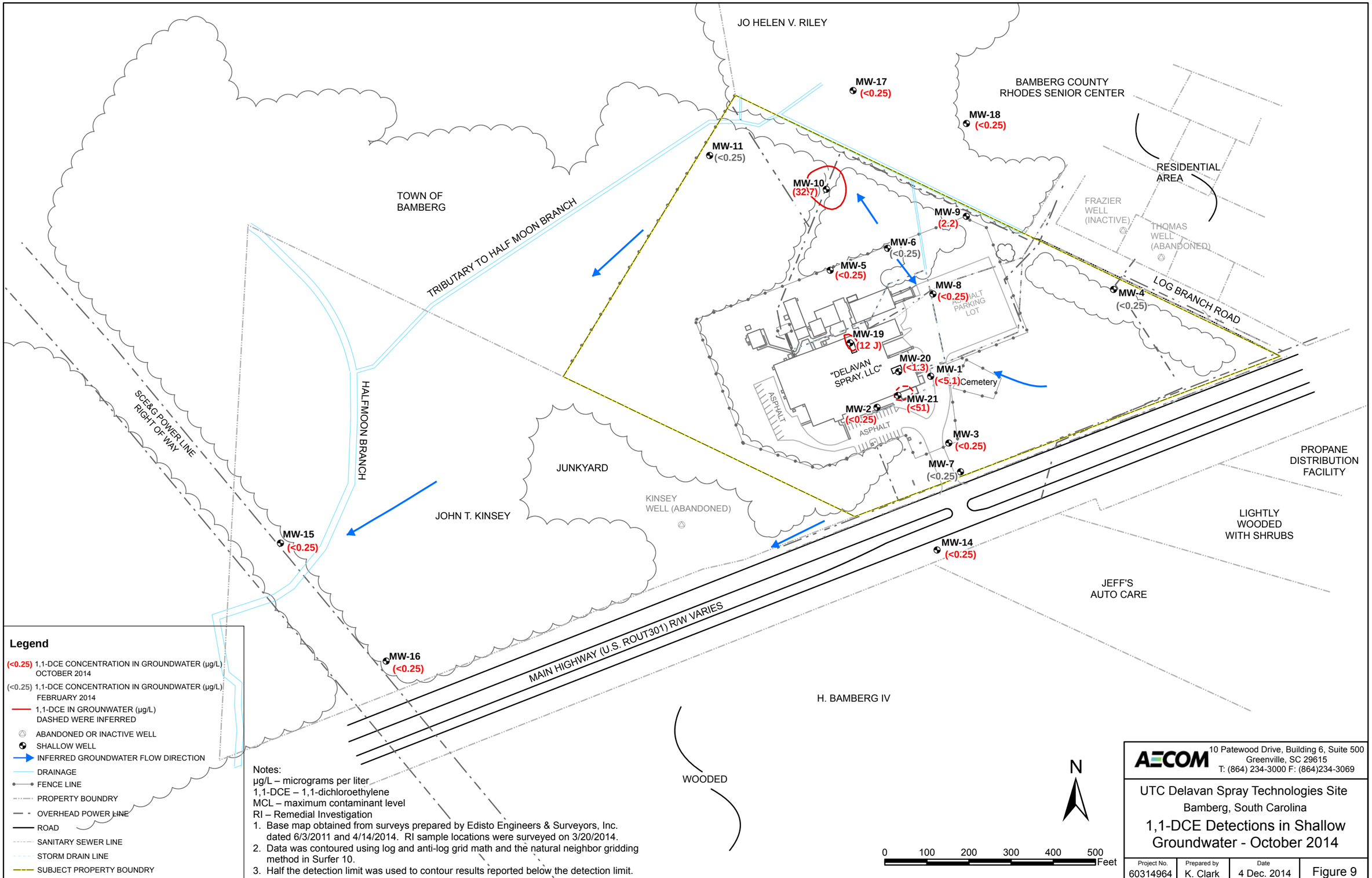
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

Vinyl Chloride Detections in Shallow Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 8

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 8 Shallow Vinyl ChlorideVs10.mxd



Legend

- (<0.25) 1,1-DCE CONCENTRATION IN GROUNDWATER (µg/L) OCTOBER 2014
- (<0.25) 1,1-DCE CONCENTRATION IN GROUNDWATER (µg/L) FEBRUARY 2014
- 1,1-DCE IN GROUNWATER (µg/L) DASHED WERE INFERRED
- ABANDONED OR INACTIVE WELL
- SHALLOW WELL
- INFERRED GROUNDWATER FLOW DIRECTION
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
1,1-DCE – 1,1-dichloroethylene
MCL – maximum contaminant level
RI – Remedial Investigation

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.

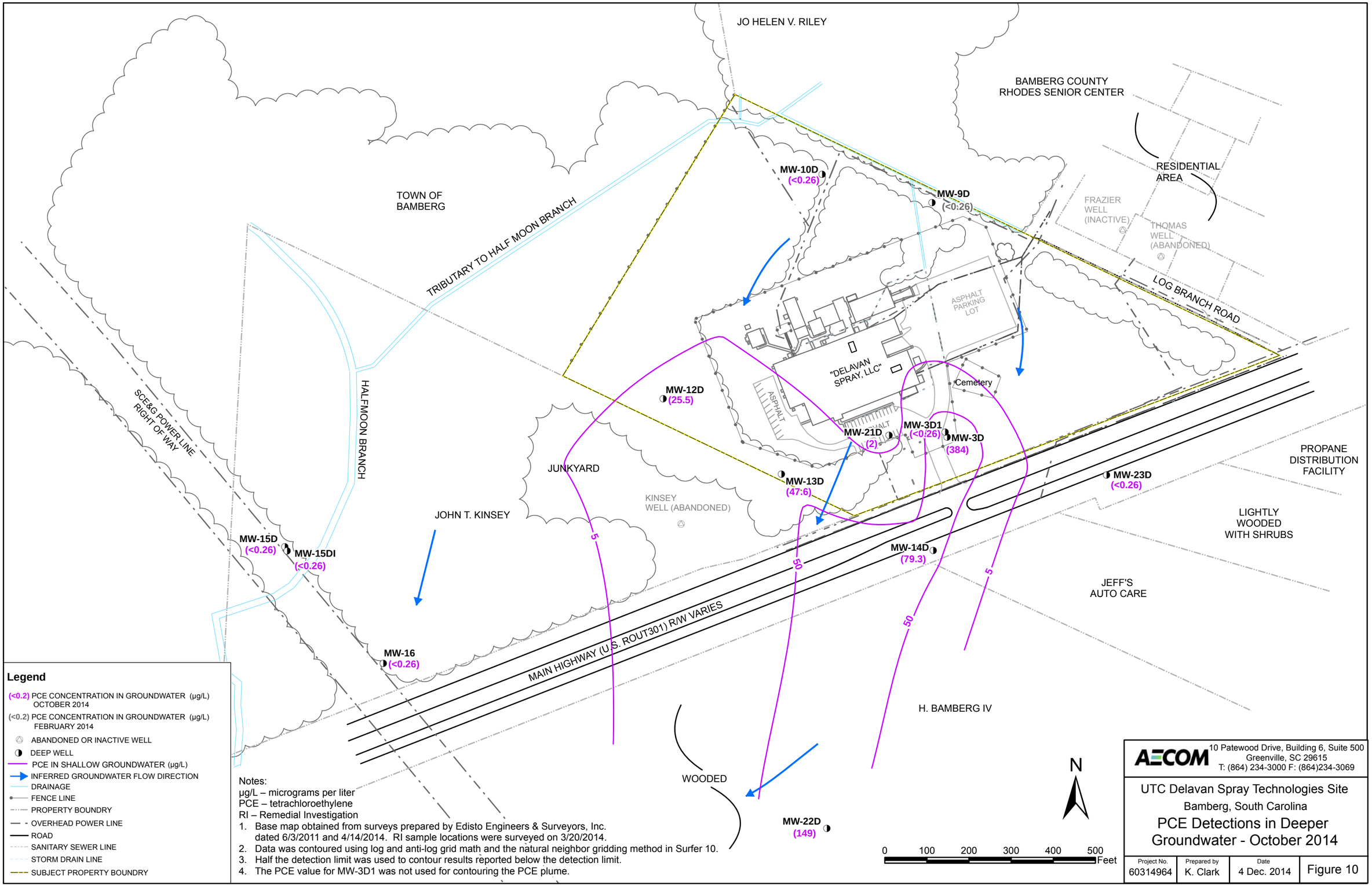
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

1,1-DCE Detections in Shallow Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 9

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 9 Shallow 1,1-DCE Vs10.mxd



Legend

- (<0.2) PCE CONCENTRATION IN GROUNDWATER (µg/L) OCTOBER 2014
- (<0.2) PCE CONCENTRATION IN GROUNDWATER (µg/L) FEBRUARY 2014
- ABANDONED OR INACTIVE WELL
- DEEP WELL
- PCE IN SHALLOW GROUNDWATER (µg/L)
- INFERRED GROUNDWATER FLOW DIRECTION
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
PCE – tetrachloroethylene
RI – Remedial Investigation

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.
4. The PCE value for MW-3D1 was not used for contouring the PCE plume.

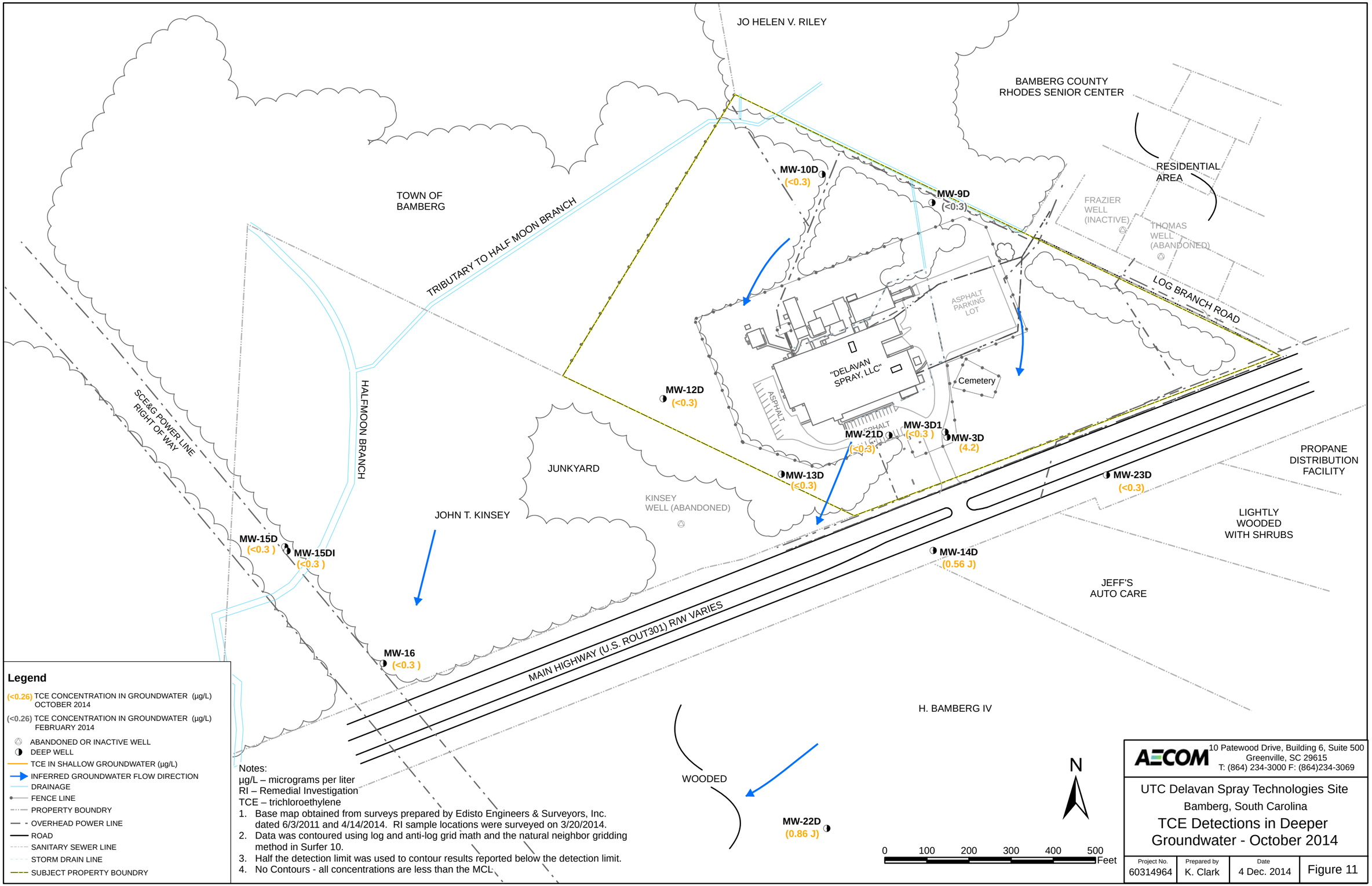
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

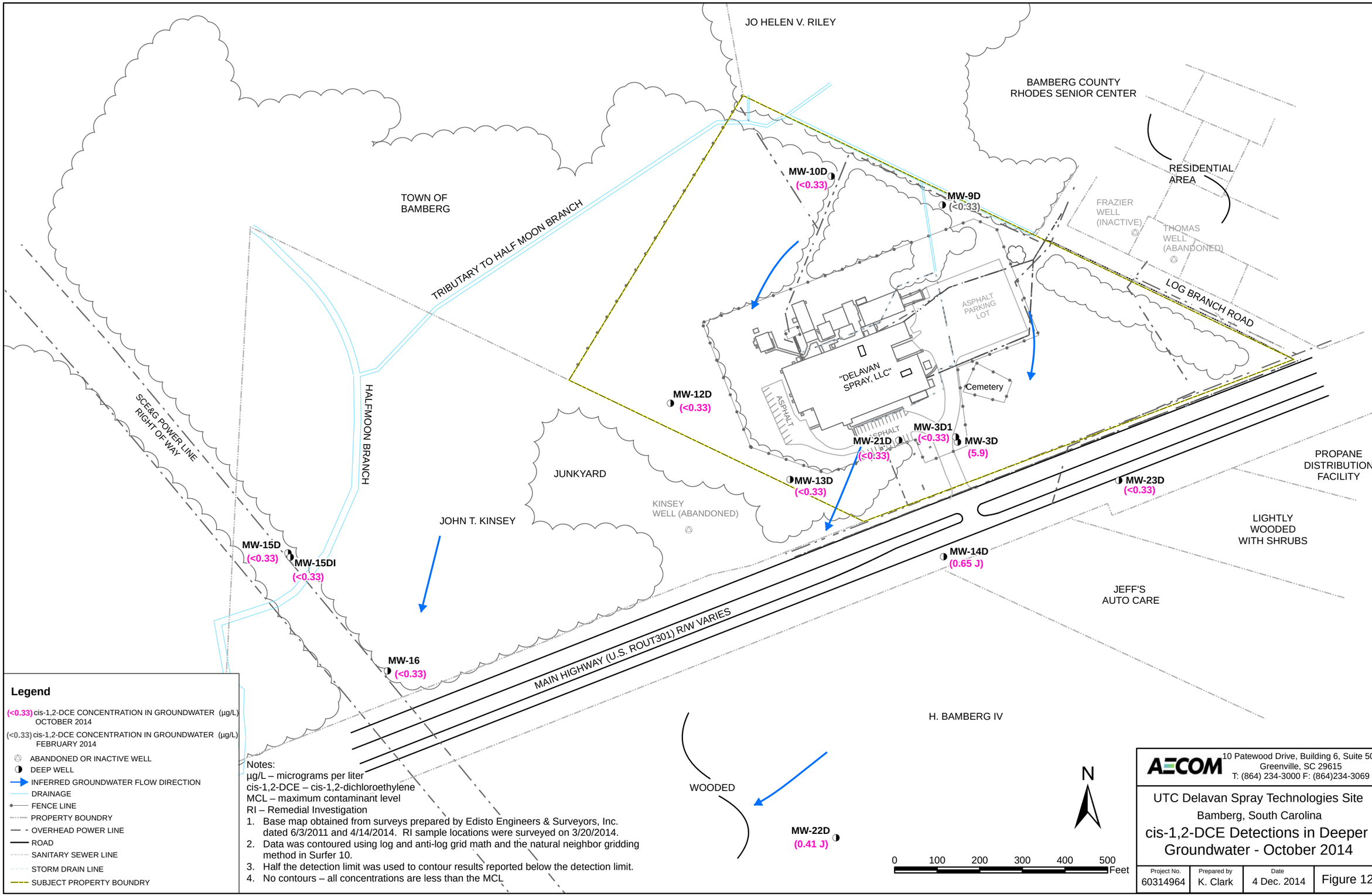
PCE Detections in Deeper Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 10

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 10 DeepPCEVs10.mxd



Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 11 DeepTCEVs10.mxd



Legend

(<0.33) cis-1,2-DCE CONCENTRATION IN GROUNDWATER (µg/L) OCTOBER 2014

(<0.33) cis-1,2-DCE CONCENTRATION IN GROUNDWATER (µg/L) FEBRUARY 2014

- ABANDONED OR INACTIVE WELL
- DEEP WELL
- INFERRED GROUNDWATER FLOW DIRECTION
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SUBJECT PROPERTY BOUNDRY

Notes:
µg/L – micrograms per liter
cis-1,2-DCE – cis-1,2-dichloroethylene
MCL – maximum contaminant level
RI – Remedial Investigation

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.
4. No contours – all concentrations are less than the MCL

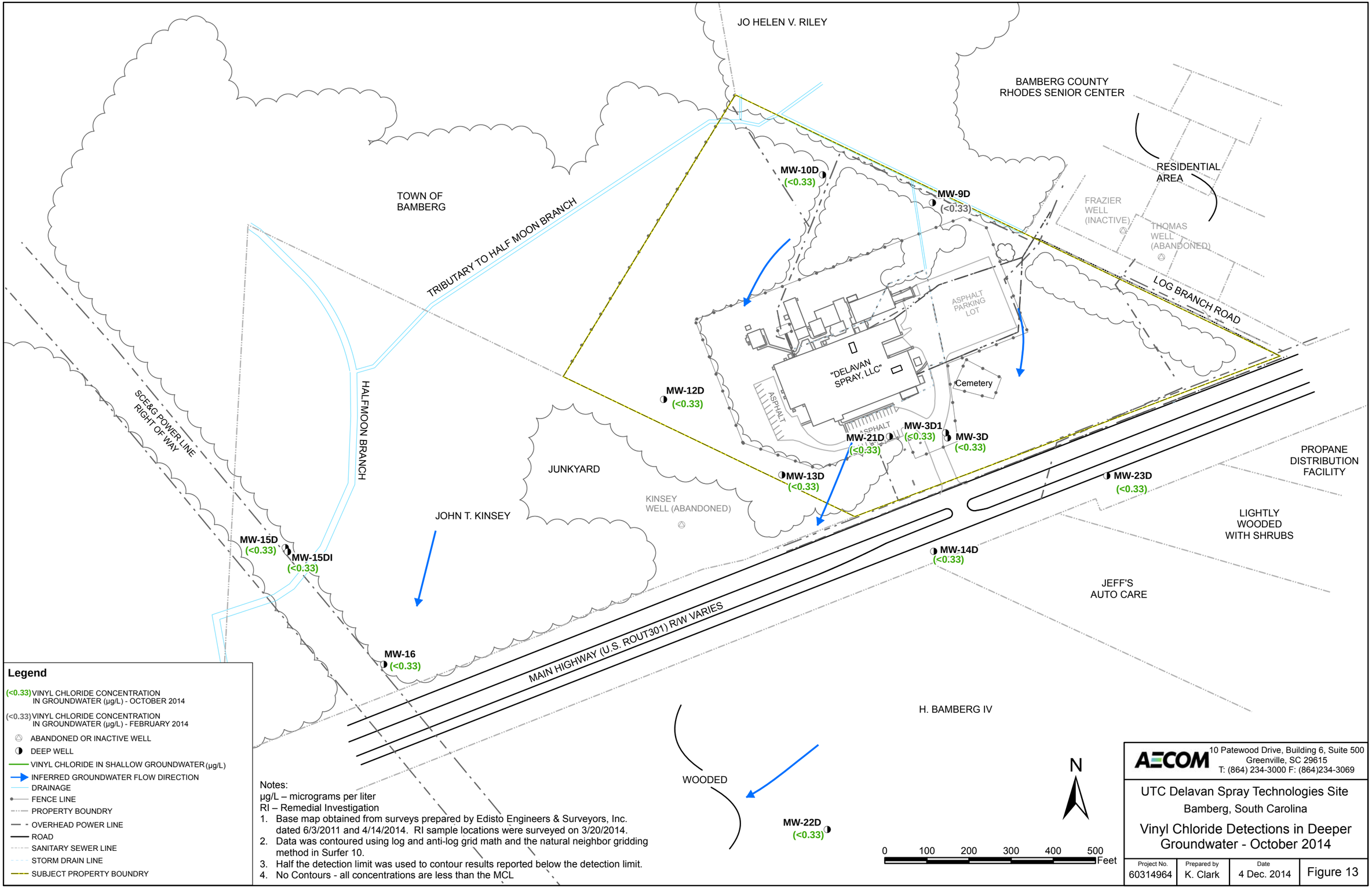
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

cis-1,2-DCE Detections in Deeper Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 12

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 12 Deep cis-1,2-DCE vs10.mxd



Notes:
µg/L – micrograms per liter
RI – Remedial Investigation
1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.
4. No Contours - all concentrations are less than the MCL

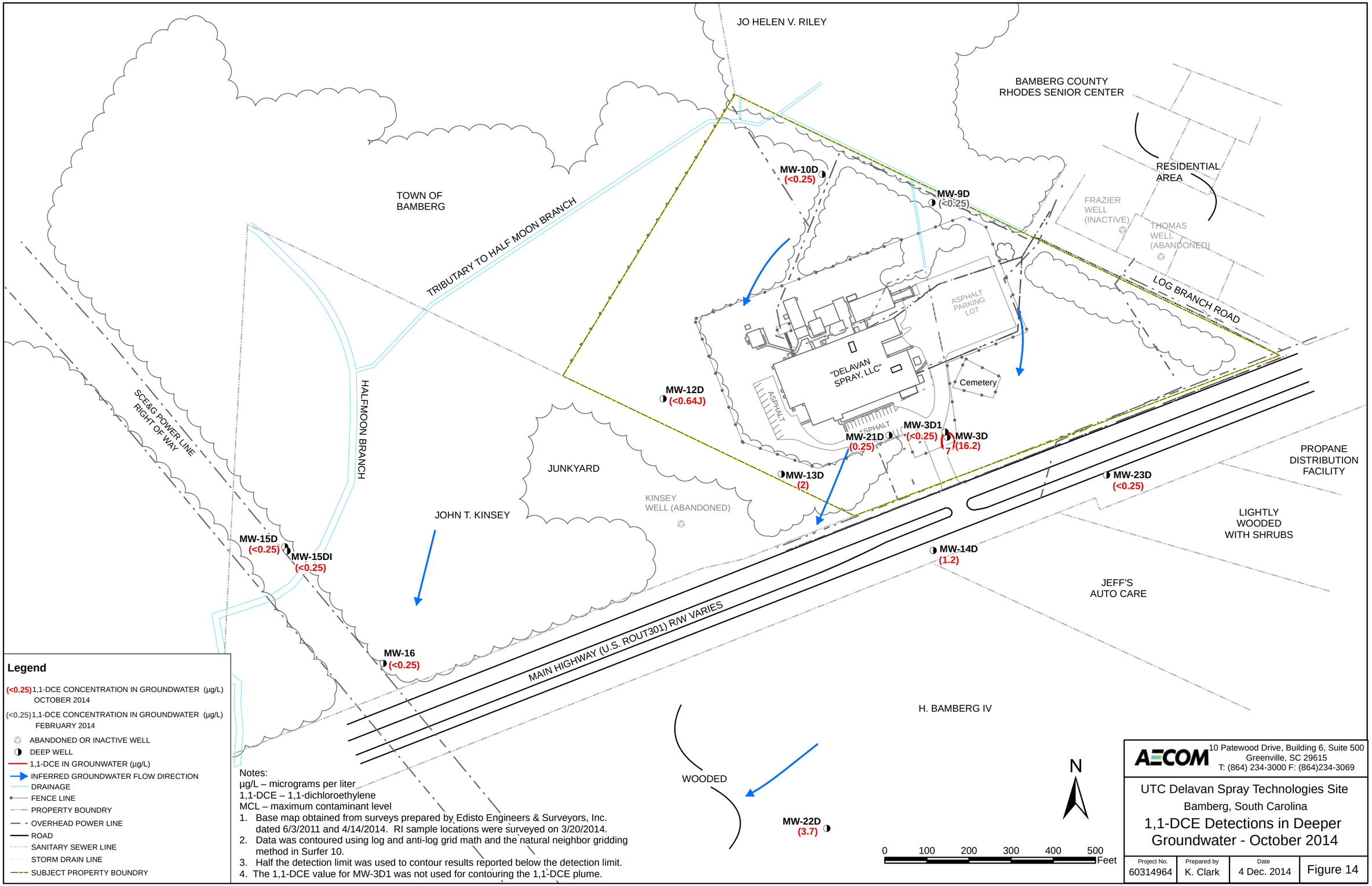
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

Vinyl Chloride Detections in Deeper Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 13

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 13 Deep Vinyl ChlorideVs10.mxd



Notes:
µg/L – micrograms per liter
1,1-DCE – 1,1-dichloroethylene
MCL – maximum contaminant level

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. RI sample locations were surveyed on 3/20/2014.
2. Data was contoured using log and anti-log grid math and the natural neighbor gridding method in Surfer 10.
3. Half the detection limit was used to contour results reported below the detection limit.
4. The 1,1-DCE value for MW-3D1 was not used for contouring the 1,1-DCE plume.

AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864) 234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

1,1-DCE Detections in Deeper Groundwater - October 2014

Project No.	Prepared by	Date	
60314964	K. Clark	4 Dec. 2014	Figure 14

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 14 Deep 1,1-DCE Vs10.mxd

TABLES

Table 1
Groundwater Levels and Elevations
Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well Number	Total Depth	Surface Casing Depth (ft bgs)	Screen Interval (ft bgs)	Ground Surface Elevation	Top of Casing Elevation	6/5/2003		7/9/2003		12/31/2003		1/16/2004		3/14/2005		6/1/2005		9/20/2005		12/12/2005	
						Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation
MW-1	18	--	3-18	147.56	147.19	9.70	137.49	8.42	138.77	12.88	134.31	13.02	134.17	12.54	134.65	12.31	134.88	12.66	134.53	13.41	133.78
MW-2	18	--	3-18	147.81	147.63	5.81	141.82	4.76	142.87	12.52	135.11	12.73	134.90	11.95	135.68	10.56	137.07	12.37	135.26	12.99	134.64
MW-3	18	--	3-18	148.34	148.11	11.41	136.70	9.20	138.91	14.11	134.00	14.11	134.00	13.54	134.57	13.86	134.25	13.94	134.17	14.58	133.53
MW-3D	49	24	44-49	148.28	148.12	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-3D1	85	65	75-85	148.12	147.93	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-4	14	--	4-14	147.30	147.03	4.11	142.92	3.59	143.44	10.38	136.65	10.63	136.40	9.24	137.79	10.23	136.80	11.44	135.59	11.81	135.22
MW-5	14	--	4-14	145.34	145.46	4.72	140.74	3.68	141.78	10.87	134.59	10.81	134.65	8.74	136.72	9.77	135.69	10.51	134.95	11.30	134.16
MW-6	14	--	4-14	143.45	143.22	2.40	140.82	2.30	140.92	8.09	135.13	7.29	135.93	6.44	136.78	6.38	136.84	8.24	134.98	8.29	134.93
MW-7	20	--	5-20	149.25	149.03	NI	NI	NI	NI	14.88	134.15	14.93	134.10	13.97	135.06	14.45	134.58	14.52	134.51	15.11	133.92
MW-8	20	--	5-20	145.95	145.66	NI	NI	NI	NI	12.06	133.60	12.17	133.49	11.97	133.69	12.14	133.52	13.07	132.59	12.81	132.85
MW-9	20	--	5-20	144.11	143.89	NI	NI	NI	NI	9.82	134.07	9.55	134.34	8.45	135.44	7.61	136.28	10.57	133.32	9.33	134.56
MW-9D	49	24	44-49	144.80	144.20	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-10	18	--	3-18	142.56	142.19	NI	NI	NI	NI	7.48	134.71	7.52	134.67	5.19	137.00	6.02	136.17	7.51	134.68	7.45	134.74
MW-10D	48	30	43-48	142.08	141.79	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-11	18	--	3-18	143.77	143.16	NI	NI	NI	NI	8.00	135.16	8.12	135.04	7.48	135.68	7.87	135.29	8.90	134.26	8.63	134.53
MW-12D	50	30	40-50	147.86	147.65	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-13D	50	30	40-50	146.41	146.23	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-14	20	--	5-20	147.05	146.90	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-14D	50	29	40-50	147.11	146.88	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-15	19	--	4-19	136.13	135.73	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-15D	45	30	35-45	135.93	135.59	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-15D1	85	65	75-85	135.94	135.69	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-16	19	--	4-19	138.74	138.30	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-16D	45	29	35-45	138.70	138.38	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-17	28.4	--	13-28	142.07	141.66	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-18	26.4	--	11-26	145.68	145.41	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-19	20.15	--	5-20	148.47	148.22	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-20	15.15	--	5-15	148.50	148.19	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-21	34.4	--	19-34	148.43	147.97	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-21D	53.4	31.5	43-53	147.28	146.92	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-22D	48.4	36	38-48	146.42	145.96	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-23D	50.4	34	40-50	148.48	148.26	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 1
Groundwater Levels and Elevations
Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well Number	Total Depth	Surface Casing Depth (ft bgs)	Screen Interval (ft bgs)	Ground Surface Elevation	Top of Casing Elevation	3/28/2006		6/26/2006		10/6/2006		1/12/2007		1/8/2008		11/4/2009		4/29/2010		10/25/2010	
						Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation
MW-1	18	--	3-18	147.56	147.19	11.97	135.22	12.16	135.03	13.67	133.52	12.06	135.13	13.50	133.69	14.70	132.49	12.20	134.99	14.38	132.81
MW-2	18	--	3-18	147.81	147.63	10.59	137.04	10.44	137.19	13.13	134.50	10.63	137.00	11.63	136.00	14.15	133.48	11.50	136.13	13.70	133.93
MW-3	18	--	3-18	148.34	148.11	13.49	134.62	13.67	134.44	14.15	133.96	13.24	134.87	13.62	134.49	15.84	132.27	13.81	134.30	14.56	133.55
MW-3D	49	24	44-49	148.28	148.12	NI	NI	NI	NI	NI	NI	NI	NI	16.10	132.02	17.30	130.82	15.03	133.09	17.39	130.73
MW-3D1	85	65	75-85	148.12	147.93	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	17.11	130.82	14.86	133.07	17.32	130.61
MW-4	14	--	4-14	147.30	147.03	7.53	139.50	9.26	137.77	11.82	135.21	7.79	139.24	9.53	137.50	13.52	133.51	8.95	138.08	12.73	134.30
MW-5	14	--	4-14	145.34	145.46	6.74	138.72	8.74	136.72	11.57	133.89	7.33	138.13	9.09	136.37	12.70	132.76	9.50	135.96	12.31	133.15
MW-6	14	--	4-14	143.45	143.22	4.17	139.05	6.30	136.92	9.46	133.76	4.90	138.32	6.10	137.12	10.09	133.13	6.50	136.72	10.00	133.22
MW-7	20	--	5-20	149.25	149.03	13.91	135.12	14.22	134.81	14.99	134.04	13.23	135.80	14.20	134.83	15.93	133.10	14.30	134.73	15.33	133.70
MW-8	20	--	5-20	145.95	145.66	11.17	134.49	12.32	133.34	13.67	131.99	11.62	134.04	12.85	132.81	14.35	131.31	11.79	133.87	14.35	131.31
MW-9	20	--	5-20	144.11	143.89	6.91	136.98	8.98	134.91	11.60	132.29	7.41	136.48	8.17	135.72	11.54	132.35	6.81	137.08	11.65	132.24
MW-9D	49	24	44-49	144.48	144.20	NI	NI	NI	NI	NI	NI	NI	NI	11.82	132.38	12.89	131.31	10.58	133.62	12.99	131.21
MW-10	18	--	3-18	142.56	142.19	3.49	138.70	5.82	136.37	8.65	133.54	4.12	138.07	5.66	136.53	9.74	132.45	6.14	136.05	9.73	132.46
MW-10D	48	30	43-48	142.08	141.79	NI	NI	NI	NI	NI	NI	NI	NI	9.45	132.34	10.68	131.11	8.38	133.41	10.76	131.03
MW-11	18	--	3-18	143.77	143.16	6.84	136.32	8.01	135.15	9.26	133.90	7.30	135.86	7.89	135.27	10.01	133.15	8.15	135.01	9.98	133.18
MW-12D	50	30	40-50	147.86	147.65	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	16.69	130.96	14.62	133.03	16.92	130.73
MW-13D	50	30	40-50	146.41	146.23	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	15.55	130.68	13.33	132.90	15.65	130.58
MW-14	20	--	5-20	147.05	146.90	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	15.03	131.87	12.69	134.21	13.99	132.91
MW-14D	50	29	40-50	147.11	146.88	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	16.20	130.68	14.01	132.87	16.34	130.54
MW-15	18	--	4-19	136.13	135.73	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-15D	45	30	35-45	135.93	135.59	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-15D1	85	65	75-85	135.94	135.69	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-16	19	--	4-19	138.74	138.30	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-16D	45	29	35-45	138.70	138.38	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-17	28.4	--	13-28	142.07	141.66	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-18	26.4	--	11-26	145.68	145.41	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-19	20.15	--	5-20	148.47	148.22	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-20	15.15	--	5-15	148.50	148.19	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-21	34.4	--	19-34	148.43	147.97	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-21D	53.4	31.5	43-53	147.28	146.92	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-22D	48.4	36	38-48	146.42	145.96	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-23D	50.4	34	40-50	148.48	148.26	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 1
Groundwater Levels and Elevations
Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well Number	Total Depth	Surface Casing Depth (ft bgs)	Screen Interval (ft bgs)	Ground Surface Elevation	Top of Casing Elevation	12/15/2010		5/23/2011		11/8/2011		5/8/2012		3/20/2014		10/27/2014	
						Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation
MW-1	18	--	3-18	147.56	147.19	15.17	132.02	13.29	133.90	14.88	132.31	13.05	134.14	11.02	136.17	13.53	133.66
MW-2	18	--	3-18	147.81	147.63	14.84	132.79	12.88	134.75	14.51	133.12	12.94	134.69	10.25	137.38	13.63	134.00
MW-3	18	--	3-18	148.34	148.11	15.84	132.27	14.01	134.10	15.65	132.46	13.93	134.18	12.15	135.96	14.16	133.95
MW-3D	49	24	44-49	148.28	148.12	17.36	130.76	16.75	131.37	17.45	130.67	16.22	131.90	13.74	134.38	16.07	132.05
MW-3D1	85	65	75-85	148.12	147.93	17.19	130.74	16.55	131.38	17.29	130.64	16.05	131.88	13.52	134.41	15.89	132.04
MW-4	14	--	4-14	147.30	147.03	13.49	133.54	11.37	135.66	Dry	NA	9.44	137.59	4.7	142.33	11.70	135.33
MW-5	14	--	4-14	145.34	145.46	13.51	131.95	11.05	134.41	13.45	132.01	8.97	136.49	4.76	140.70	11.43	134.03
MW-6	14	--	4-14	143.45	143.22	11.32	131.90	8.40	134.82	11.15	132.07	6.20	137.02	3.04	140.18	5.96	137.26
MW-7	20	--	5-20	149.25	149.03	15.89	133.14	14.65	134.38	15.73	133.30	14.39	134.64	11.87	137.16	14.73	134.30
MW-8	20	--	5-20	145.95	145.66	14.52	131.14	13.50	132.16	14.60	131.06	12.88	132.78	10.27	135.39	13.02	132.64
MW-9	20	--	5-20	144.11	143.89	12.55	131.34	9.20	134.69	12.60	131.29	6.25	137.64	4.87	139.02	9.78	134.11
MW-9D	49	24	44-49	144.48	144.20	12.98	131.22	12.26	131.94	13.12	131.08	11.78	132.42	9.15	135.05	11.64	132.56
MW-10	18	--	3-18	142.56	142.19	10.66	131.53	7.98	134.21	10.57	131.62	5.88	136.31	2.63	139.56	8.50	133.69
MW-10D	48	30	43-48	142.08	141.79	10.76	131.03	10.02	131.77	10.89	130.90	9.59	132.20	6.99	134.80	9.40	132.39
MW-11	18	--	3-18	143.77	143.16	10.92	132.24	9.11	134.05	10.82	132.34	8.39	134.77	6.39	136.77	8.96	134.20
MW-12D	50	30	40-50	147.86	147.65	16.87	130.78	16.18	131.47	16.99	130.66	15.69	131.96	13.28	134.37	15.55	132.10
MW-13D	50	30	40-50	146.41	146.23	15.61	130.62	14.99	131.24	15.71	130.52	14.44	131.79	12.02	134.21	14.29	131.94
MW-14	20	--	5-20	147.05	146.90	14.67	132.23	13.38	133.52	14.52	132.38	12.97	133.93	10.49	136.41	13.02	133.88
MW-14D	50	29	40-50	147.11	146.88	16.26	130.62	15.69	131.19	16.37	130.51	15.09	131.79	12.71	134.17	14.99	131.89
MW-15	18	--	4-19	136.13	135.73	NI	NI	5.44	130.29	6.68	129.05	3.77	131.96	1.71	134.02	4.49	131.24
MW-15D	45	30	35-45	135.93	135.59	NI	NI	4.55	131.04	5.23	130.36	4.15	131.44	1.92	133.67	3.79	131.80
MW-15D1	85	65	75-85	135.94	135.69	NI	NI	NI	NI	NI	NI	4.25	131.44	2.04	133.65	3.91	131.78
MW-16	19	--	4-19	138.74	138.30	NI	NI	6.40	131.90	8.15	130.15	5.26	133.04	2.54	135.76	6.68	131.62
MW-16D	45	29	35-45	138.70	138.38	NI	NI	7.49	130.89	8.30	130.08	7.05	131.33	4.79	133.59	6.76	131.62
MW-17	28.4	--	13-28	142.07	141.66	NI	NI	NI	NI	NI	NI	NI	NI	1.90	139.76	6.93	134.73
MW-18	26.4	--	11-26	145.68	145.41	NI	NI	NI	NI	NI	NI	NI	NI	9.07	136.34	12.48	132.93
MW-19	20.15	--	5-20	148.47	148.22	NI	NI	NI	NI	NI	NI	NI	NI	11.35	136.87	14.42	133.80
MW-20	15.15	--	5-15	148.50	148.19	NI	NI	NI	NI	NI	NI	NI	NI	11.11	137.08	14.30	133.89
MW-21	34.4	--	19-34	148.43	147.97	NI	NI	NI	NI	NI	NI	NI	NI	11.42	136.55	14.59	133.38
MW-21D	53.4	31.5	43-53	147.28	146.92	NI	NI	NI	NI	NI	NI	NI	NI	12.51	134.41	14.84	132.08
MW-22D	48.4	36	38-48	146.42	145.96	NI	NI	NI	NI	NI	NI	NI	NI	11.96	134.00	14.19	131.77
MW-23D	50.4	34	40-50	148.48	148.26	NI	NI	NI	NI	NI	NI	NI	NI	13.73	134.53	16.18	132.08

Notes:

bgs = below ground surface; btoc - below top of casing; H&H - Hart & Hickman; NI = Not Installed; NA = Not Applicable

NI - Not installed on the date of the measurement.

1. Depth to water measured in feet btoc.
2. Top of casing and ground surface elevations surveyed by Edisto Engineers and Surveyors, Inc. on May 23, 2011 and March 20, 2014.
3. Vertical positions are referenced to the North American Vertical Datum of 1988 (NAVD88).
4. MW-15D1 TOC elevation tied into existing site wells by H&H on April 30, 2012.
5. Information for historic monitoring wells from Table 1 of the RI Workplan (H&H, 2013).

Table 2
Groundwater Quality Indicator Parameters
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well	pH (S.U.)	Conductivity (mS/cm)	Temperature (^oC)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-1	4.13	0.034	24.83	2.07	2.30	113.2
MW-2	4.36	0.020	24.86	1.14	1.49	219.3
MW-3	4.35	0.023	24.22	11.09	4.40	376.4
MW-3D	7.54	0.231	21.93	2.75	3.19	234.5
MW-3D1	7.59	0.224	22.03	0.62	0.21	-92.1
MW-4	NS	NS	NS	NS	NS	NS
MW-5	4.37	0.021	24.47	6.71	4.12	327.2
MW-6	NS	NS	NS	NS	NS	NS
MW-7	NS	NS	NS	NS	NS	NS
MW-8	4.27	0.051	26.18	0.94	3.59	343.7
MW-9	4.11	0.024	21.64	4.47	0.95	149.8
MW-9D	NS	NS	NS	NS	NS	NS
MW-10	4.35	0.028	20.70	0.51	0.68	-37.4
MW-10D	7.60	0.214	18.79	0.01	4.18	140.1
MW-11	NS	NS	NS	NS	NS	NS
MW-12D	9.97	0.254	20.56	2.55	4.82	20.9
MW-13D	7.86	0.217	21.76	2.40	4.45	81.6
MW-14	4.39	0.024	25.57	1.59	5.61	310.5
MW-14D	7.58	0.227	23.16	68.21	0.26	86.1
MW-15	4.43	0.360	19.94	2.57	0.49	154.8
MW-15D	7.11	0.421	18.47	5.19	2.56	33.9
MW-15D1	7.68	0.211	18.78	5.48	0.24	-155.6
MW-16	4.53	0.031	20.46	8.42	0.58	222.9
MW-16D	7.37	0.310	18.98	2.48	3.84	138.7
MW-17	4.45	0.161	18.21	0.80	2.49	185.4
MW-18	4.21	0.046	20.18	0.00	1.68	199.6
MW-19	4.37	0.132	22.25	1.65	5.69	381.3
MW-20	4.40	0.033	22.41	11.32	4.50	386.8
MW-21	4.44	0.024	21.58	5.40	1.04	330.1
MW-21D	7.53	0.200	21.08	1.95	0.21	649.1
MW-22D	11.08	0.429	20.25	1.66	1.95	11.1
MW-23D	7.40	0.282	22.24	3.97	1.15	111.0

Notes:
^oC - degrees Celsius
mg/L - milligrams per liter
mS/cm - milliSiemens per centimeter
mV - millivolts
ORP - oxidation-reduction potential
NS - not sampled
NTUs - Nephelometric Turbidity Units
S.U. - standard units

Table 3
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	MW-1 FA19497-1 10/27/14	MW-2 FA19497-2 10/27/14	MW-3 FA19534-4 10/28/14	MW-3D FA19534-5 10/28/14	MW-3D1 FA19534-6 10/28/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)						
1,1,1-Trichloroethane	200	< 6.7	< 0.34	< 0.34	**0.58 J//**	< 0.34
1,1,2,2-Tetrachloroethane	—	< 5.5	< 0.27	< 0.27	< 0.27	< 0.27
1,1,2-Trichloroethane	5	< 6.3	< 0.32	< 0.32	< 0.32	< 0.32
1,1-Dichloroethane	—	< 5.1	< 0.26	< 0.26	< 0.26	< 0.26
1,1-Dichloroethylene	7	< 5.1	< 0.25	< 0.25	**16.2**	< 0.25
1,2-Dichloroethane	5	< 4.8	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	5	< 7.1	< 0.36	< 0.36	< 0.36	< 0.36
2-Hexanone	—	< 40	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	—	< 20	< 1	< 1	< 1	< 1
Acetone	—	< 210	< 11	< 11	< 11	< 11
Benzene	5	< 4.9	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	80 [1]	< 5.2	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	80 [1]	< 7.7	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	—	< 4	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	5	< 7.9	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	100	< 4.8	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	—	< 10	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	80 [1]	< 6.2	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	**131**	< 0.33	< 0.33	**5.9**	< 0.33
cis-1,3-Dichloropropene	—	< 4.2	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	80 [1]	< 7.2	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	700	< 5.6	< 0.28	< 0.28	< 0.28	< 0.28
Methyl bromide	—	< 11	< 0.54	< 0.54	< 0.54	< 0.54
Methyl chloride	—	< 11	< 0.53	< 0.53	< 0.53	< 0.53
Methyl ethyl ketone	—	< 30	< 1.5	< 1.5	< 1.5	< 1.5
Methylene chloride	5	< 40	< 2	< 2	< 2	< 2
Styrene	100	< 4.7	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	5	**785**	**1.2**	**49.9**	**384**	< 0.26
Toluene	1000	< 4	< 0.2	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	100	< 6.9	< 0.34	< 0.34	< 0.34	< 0.34
trans-1,3-Dichloropropene	—	< 4.2	< 0.21	< 0.21	< 0.21	< 0.21
Trichloroethylene	5	**18.6 J//**	< 0.3	**1.4**	**4.2**	< 0.3
Vinyl chloride	2	**10.9 J//**	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	10,000	< 13	< 0.66	< 0.66	< 0.66	< 0.66
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)						
Ethane	—	—	—	—	—	—
Ethene	—	—	—	—	—	—
Methane	—	—	—	—	—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)						
Chloride	250,000 [2]	—	—	—	—	—
Nitrogen, Nitrate	10,000	—	—	—	—	—
Nitrogen, Nitrite	1000	—	—	—	—	—
Sulfate	250,000 [2]	—	—	—	—	—
Total Organic Carbon by USEPA Method 5310 (µg/L)						
Total Organic Carbon	—	—	—	—	—	—

Table 3
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	MW-5 FA19497-8 10/28/14	MW-8 FA19497-7 10/28/14	MW-9 FA19534-17 10/29/14	MW-10 FA19534-13 10/29/14	MW-10D FA19534-12 10/29/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)						
1,1,1-Trichloroethane	200	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
1,1,2,2-Tetrachloroethane	—	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
1,1,2-Trichloroethane	5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
1,1-Dichloroethane	—	< 0.26	< 0.26	< 0.26	**0.37 J//**	< 0.26
1,1-Dichloroethylene	7	< 0.25	< 0.25	**2.2**	**32.7**	< 0.25
1,2-Dichloroethane	5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	5	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
2-Hexanone	—	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	—	< 1	< 1	< 1	< 1	< 1
Acetone	—	< 11	< 11	< 11	< 11	< 11
Benzene	5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	80 [1]	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	80 [1]	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	—	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	100	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	—	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	80 [1]	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	**92.2**	**664**	< 0.33
cis-1,3-Dichloropropene	—	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	80 [1]	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	700	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
Methyl bromide	—	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54
Methyl chloride	—	< 0.53	< 0.53	< 0.53	< 0.53	< 0.53
Methyl ethyl ketone	—	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Methylene chloride	5	< 2	< 2	< 2	< 2	< 2
Styrene	100	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	5	**1.1**	**71.4**	**727 /M/m**	**136**	< 0.26
Toluene	1000	< 0.2	< 0.2	< 0.2	**2.6**	< 0.2
trans-1,2-Dichloroethylene	100	< 0.34	< 0.34	**0.59 J//**	**0.51 J//**	< 0.34
trans-1,3-Dichloropropene	—	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Trichloroethylene	5	< 0.3	**3.2**	**159**	**36.9**	< 0.3
Vinyl chloride	2	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	10,000	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)						
Ethane	—	< 0.32	< 0.32	—	—	—
Ethene	—	< 0.43	< 0.43	—	—	—
Methane	—	< 0.16	< 0.16	—	—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)						
Chloride	250,000 [2]	**930 J//**	**6500**	—	—	—
Nitrogen, Nitrate	10,000	< 50	**2400**	—	—	—
Nitrogen, Nitrite	1000	< 50	< 50	—	—	—
Sulfate	250,000 [2]	**8100**	**2200**	—	—	—
Total Organic Carbon by USEPA Method 5310 (µg/L)						
Total Organic Carbon	—	**450 J//**	**230 J//**	—	—	—

Table 3
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	MW-12D FA19534-19 10/29/14	MW-13D FA19534-18 10/29/14	MW-14 FA19497-9 10/28/14	MW-14D FA19534-1 10/28/14	MW-15 FA19534-8 10/29/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)						
1,1,1-Trichloroethane	200	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
1,1,2,2-Tetrachloroethane	—	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
1,1,2-Trichloroethane	5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
1,1-Dichloroethane	—	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
1,1-Dichloroethylene	7	**0.64 J//**	**2**	< 0.25	**1.2**	< 0.25
1,2-Dichloroethane	5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	5	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
2-Hexanone	—	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	—	< 1	< 1	< 1	< 1	< 1
Acetone	—	< 11	< 11	< 11	< 11	< 11
Benzene	5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	80 [1]	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	80 [1]	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	—	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	100	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	—	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	80 [1]	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	< 0.33	**0.65 J//**	< 0.33
cis-1,3-Dichloropropene	—	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	80 [1]	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	700	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
Methyl bromide	—	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54
Methyl chloride	—	< 0.53	< 0.53	< 0.53	< 0.53	< 0.53
Methyl ethyl ketone	—	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Methylene chloride	5	< 2	< 2	< 2	< 2	< 2
Styrene	100	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	5	**25.5**	**47.6**	< 0.26	**79.3**	< 0.26
Toluene	1000	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	100	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
trans-1,3-Dichloropropene	—	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Trichloroethylene	5	< 0.3	< 0.3	< 0.3	**0.56 J//**	< 0.3
Vinyl chloride	2	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	10,000	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)						
Ethane	—	—	—	< 0.32	—	—
Ethene	—	—	—	< 0.43	—	—
Methane	—	—	—	< 0.16	—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)						
Chloride	250,000 [2]	—	—	**2600**	—	—
Nitrogen, Nitrate	10,000	—	—	**450**	—	—
Nitrogen, Nitrite	1000	—	—	< 50	—	—
Sulfate	250,000 [2]	—	—	**2100**	—	—
Total Organic Carbon by USEPA Method 5310 (µg/L)						
Total Organic Carbon	—	—	—	**250 J//**	—	—

Table 3
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	MW-15D FA19534-9 10/29/14	MW-15D1 FA19534-11 10/29/14	MW-16 FA19534-14 10/29/14	MW-16D FA19534-16 10/29/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)					
1,1,1-Trichloroethane	200	< 0.34	< 0.34	< 0.34	< 0.34
1,1,2,2-Tetrachloroethane	—	< 0.27	< 0.27	< 0.27	< 0.27
1,1,2-Trichloroethane	5	< 0.32	< 0.32	< 0.32	< 0.32
1,1-Dichloroethane	—	< 0.26	< 0.26	< 0.26	< 0.26
1,1-Dichloroethylene	7	< 0.25	< 0.25	< 0.25	< 0.25
1,2-Dichloroethane	5	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	5	< 0.36	< 0.36	< 0.36	< 0.36
2-Hexanone	—	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	—	< 1	< 1	< 1	< 1
Acetone	—	< 11	< 11	< 11	< 11
Benzene	5	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	80 [1]	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	80 [1]	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	—	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	5	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	100	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	—	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	80 [1]	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	< 0.33	< 0.33
cis-1,3-Dichloropropene	—	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	80 [1]	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	700	< 0.28	< 0.28	< 0.28	< 0.28
Methyl bromide	—	< 0.54	< 0.54	< 0.54	< 0.54
Methyl chloride	—	< 0.53	< 0.53	< 0.53	< 0.53
Methyl ethyl ketone	—	< 1.5	< 1.5	< 1.5	< 1.5
Methylene chloride	5	< 2	< 2	< 2	< 2
Styrene	100	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	5	< 0.26	< 0.26	< 0.26	< 0.26
Toluene	1000	< 0.2	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	100	< 0.34	< 0.34	< 0.34	< 0.34
trans-1,3-Dichloropropene	—	< 0.21	< 0.21	< 0.21	< 0.21
Trichloroethylene	5	< 0.3	< 0.3	< 0.3	< 0.3
Vinyl chloride	2	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	10,000	< 0.66	< 0.66	< 0.66	< 0.66
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)					
Ethane	—	—	—	—	—
Ethene	—	—	—	—	—
Methane	—	—	—	—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)					
Chloride	250,000 [2]	—	—	—	—
Nitrogen, Nitrate	10,000	—	—	—	—
Nitrogen, Nitrite	1000	—	—	—	—
Sulfate	250,000 [2]	—	—	—	—
Total Organic Carbon by USEPA Method 5310 (µg/L)					
Total Organic Carbon	—	—	—	—	—

Table 3
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	MW-17 FA19534-7 10/29/14	MW-18 FA19534-10 10/29/14	MW-19 FA19497-3 10/28/14	MW-20 FA19497-6 10/28/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)					
1,1,1-Trichloroethane	200	< 0.34	< 0.34	**16 J//**	< 1.7
1,1,2,2-Tetrachloroethane	—	< 0.27	< 0.27	< 5.5	< 1.4
1,1,2-Trichloroethane	5	< 0.32	< 0.32	< 6.3	< 1.6
1,1-Dichloroethane	—	< 0.26	< 0.26	< 5.1	< 1.3
1,1-Dichloroethylene	7	< 0.25	< 0.25	**12 J//**	< 1.3
1,2-Dichloroethane	5	< 0.24	< 0.24	< 4.8	< 1.2
1,2-Dichloropropane	5	< 0.36	< 0.36	< 7.1	< 1.8
2-Hexanone	—	< 2	< 2	< 40	< 10
4-Methyl-2-pentanone	—	< 1	< 1	< 20	< 5
Acetone	—	< 11	< 11	< 210	< 53
Benzene	5	< 0.24	< 0.24	< 4.9	< 1.2
Bromodichloromethane	80 [1]	< 0.26	< 0.26	< 5.2	< 1.3
Bromoform	80 [1]	< 0.38	< 0.38	< 7.7	< 1.9
Carbon disulfide	—	< 0.2	< 0.2	< 4	< 1
Carbon tetrachloride	5	< 0.4	< 0.4	< 7.9	< 2
Chlorobenzene	100	< 0.24	< 0.24	< 4.8	< 1.2
Chloroethane	—	< 0.5	< 0.5	< 10	< 2.5
Chloroform	80 [1]	< 0.31	< 0.31	< 6.2	< 1.6
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	< 6.5	< 1.6
cis-1,3-Dichloropropene	—	< 0.21	< 0.21	< 4.2	< 1
Dibromochloromethane	80 [1]	< 0.36	< 0.36	< 7.2	< 1.8
Ethylbenzene	700	< 0.28	< 0.28	< 5.6	< 1.4
Methyl bromide	—	< 0.54	< 0.54	< 11	< 2.7
Methyl chloride	—	< 0.53	< 0.53	< 11	< 2.7
Methyl ethyl ketone	—	< 1.5	< 1.5	< 30	< 7.4
Methylene chloride	5	< 2	< 2	< 40	< 10
Styrene	100	< 0.23	< 0.23	< 4.7	< 1.2
Tetrachloroethylene	5	< 0.26	< 0.26	**3470**	**428**
Toluene	1000	< 0.2	< 0.2	< 4	< 1
trans-1,2-Dichloroethylene	100	< 0.34	< 0.34	< 6.9	< 1.7
trans-1,3-Dichloropropene	—	< 0.21	< 0.21	< 4.2	< 1.1
Trichloroethylene	5	< 0.3	< 0.3	< 6	**2.7 J//**
Vinyl chloride	2	< 0.33	< 0.33	< 6.5	< 1.6
Xylene (total)	10,000	< 0.66	< 0.66	< 13	< 3.3
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)					
Ethane	—	—	—	< 0.32	< 0.32
Ethene	—	—	—	< 0.43	< 0.43
Methane	—	—	—	< 0.16	< 0.16
Water Quality Parameters by USEPA Method 9056 (µg/L)					
Chloride	250,000 [2]	—	—	**29000**	< 4000
Nitrogen, Nitrate	10,000	—	—	**3600**	**1100**
Nitrogen, Nitrite	1000	—	—	< 50	< 250
Sulfate	250,000 [2]	—	—	**4600**	< 3000
Total Organic Carbon by USEPA Method 5310 (µg/L)					
Total Organic Carbon	—	—	—	**560 J//**	**1200**

Table 3
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	MW-21 FA19497-5 10/28/14	MW-21D FA19497-4 10/28/14	MW-22D FA19497-10 10/28/14	MW-23D FA19534-3 10/28/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)					
1,1,1-Trichloroethane	200	< 67	< 0.34	< 0.34	< 0.34
1,1,2,2-Tetrachloroethane	—	< 55	< 0.27	< 0.27	< 0.27
1,1,2-Trichloroethane	5	< 63	< 0.32	< 0.32	< 0.32
1,1-Dichloroethane	—	< 51	< 0.26	< 0.26	< 0.26
1,1-Dichloroethylene	7	< 51	< 0.25	**3.7**	< 0.25
1,2-Dichloroethane	5	< 48	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	5	< 71	< 0.36	< 0.36	< 0.36
2-Hexanone	—	< 400	< 2	< 2	< 2
4-Methyl-2-pentanone	—	< 200	< 1	< 1	< 1
Acetone	—	< 2100	< 11	< 11	< 11
Benzene	5	< 49	< 0.24	< 0.24	< 0.24
Bromodichloromethane	80 [1]	< 52	< 0.26	< 0.26	< 0.26
Bromoform	80 [1]	< 77	< 0.38	< 0.38	< 0.38
Carbon disulfide	—	< 40	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	5	< 79	< 0.4	< 0.4	< 0.4
Chlorobenzene	100	< 48	< 0.24	< 0.24	< 0.24
Chloroethane	—	< 100	< 0.5	< 0.5	< 0.5
Chloroform	80 [1]	< 62	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	**733**	< 0.33	**0.41 J//**	< 0.33
cis-1,3-Dichloropropene	—	< 42	< 0.21	< 0.21	< 0.21
Dibromochloromethane	80 [1]	< 72	< 0.36	< 0.36	< 0.36
Ethylbenzene	700	< 56	< 0.28	< 0.28	< 0.28
Methyl bromide	—	< 110	< 0.54	< 0.54	< 0.54
Methyl chloride	—	< 110	< 0.53	< 0.53	< 0.53
Methyl ethyl ketone	—	< 300	< 1.5	< 1.5	< 1.5
Methylene chloride	5	< 400	< 2	< 2	< 2
Styrene	100	< 47	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	5	**14500**	**2**	**149**	< 0.26
Toluene	1000	< 40	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	100	< 69	< 0.34	< 0.34	< 0.34
trans-1,3-Dichloropropene	—	< 42	< 0.21	< 0.21	< 0.21
Trichloroethylene	5	**354**	< 0.3	**0.86 J//**	< 0.3
Vinyl chloride	2	< 65	< 0.33	< 0.33	< 0.33
Xylene (total)	10,000	< 130	< 0.66	< 0.66	< 0.66
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)					
Ethane	—	< 0.32	< 0.32	< 0.32	—
Ethene	—	< 0.43	< 0.43	< 0.43	—
Methane	—	**82.6**	**0.77**	< 0.16	—
Water Quality Parameters by USEPA Method 9056 (µg/L)					
Chloride	250,000 [2]	**3700**	**3300**	**8500**	—
Nitrogen, Nitrate	10,000	**90 J//**	< 50	**820**	—
Nitrogen, Nitrite	1000	**50 J//**	< 50	**260**	—
Sulfate	250,000 [2]	< 600	**2800**	**5500**	—
Total Organic Carbon by USEPA Method 5310 (µg/L)					
Total Organic Carbon	—	**780 J//**	< 230	**1000**	—

Notes:
µg/L - micrograms per liter (parts per billion)
USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level (April, 2012).
[1] 1998 Final Rule for Disinfectants and Disinfection By-products. The total for trihalomethanes (THM) is 80 ug/L.
[2] Secondary Standard.
— - Indicates No Standard (for screening criteria) or Not Analyzed (for analytical data).
Bold font and shading indicate the concentration is detected.
Bold outline indicates the concentration exceeds the MCL.
South Carolina Department of Health and Environmental Control (SCDHEC) R.61-68 Water Classifications and Standards (June 22, 2012) were also identified for the list of detected chemicals in groundwater. In each case, however, they were the same values as the USEPA MCLs.
See Table 7 for explanation of data qualifiers.

Table 4
Analytical Results for Potable Water Sample
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA MCL	POTABLE-1 FA19534-21 10/29/2014		
Volatile Organic Compounds by Method 8260B (µg/L)				
1,1,1-Trichloroethane	200	<	0.34	
1,1,2,2-Tetrachloroethane	—	<	0.27	
1,1,2-Trichloroethane	5	<	0.32	
1,1-Dichloroethane	—	<	0.26	
1,1-Dichloroethylene	7	<	0.25	
1,2-Dichloroethane	5	<	0.24	
1,2-Dichloropropane	5	<	0.36	
2-Hexanone	—	<	2	
4-Methyl-2-pentanone	—	<	1	
Acetone	—	<	11	
Benzene	5	<	0.24	
Bromodichloromethane	80 [1]	<	0.26	
Bromoform	80 [1]	<	0.38	
Carbon disulfide	—	<	0.2	
Carbon tetrachloride	5	<	0.4	
Chlorobenzene	100	<	0.24	
Chloroethane	—	<	0.5	
Chloroform	80 [1]		**0.9**	**J//**
cis-1,2-Dichloroethylene	70	<	0.33	
cis-1,3-Dichloropropene	—	<	0.21	
Dibromochloromethane	80 [1]	<	0.36	
Ethylbenzene	700	<	0.28	
Methyl bromide	—	<	0.54	
Methyl chloride	—	<	0.53	
Methyl ethyl ketone	—	<	1.5	
Methylene chloride	5	<	2	
Styrene	100	<	0.23	
Tetrachloroethylene	5	<	0.26	
Toluene	1000	<	0.2	
trans-1,2-Dichloroethylene	100	<	0.34	
trans-1,3-Dichloropropene	—	<	0.21	
Trichloroethylene	5	<	0.3	
Vinyl chloride	2	<	0.33	
Xylene (total)	10000	<	0.66	

Notes:
— - No Standard
µg/L - micrograms per liter (parts per billion)
USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level (April, 2012).
[1] 1998 Final Rule for Disinfectants and Disinfection By-products. The total for trihalomethanes (THM) is 80 ug/L.
Bold font and shading indicate the concentration is detected.
South Carolina Department of Health and Environmental Control (SCDHEC) R.61-68 Water Classifications and Standards (June 22, 2012) were also identified for the list of detected chemicals in groundwater. In each case, however, they were the same values as the USEPA MCLs.
See Table 7 for explanation of data qualifiers.

Table 5
Analytical Results for Investigation-Derived Waste Sample
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA Toxicity Characteristic	IDW FA19534-20 10/29/2014	
Volatile Organic Compounds by Method 8260B (µg/L)			
1,1,1-Trichloroethane	—	< 0.34	
1,1,2,2-Tetrachloroethane	—	< 0.27	
1,1,2-Trichloroethane	—	< 0.32	
1,1-Dichloroethane	—	< 0.26	
1,1-Dichloroethylene	700	**1.1**	
1,2-Dichloroethane	500	< 0.24	
1,2-Dichloropropane	—	< 0.36	
2-Hexanone	—	< 2	
4-Methyl-2-pentanone	—	< 1	
Acetone	—	< 11	
Benzene	500	< 0.24	
Bromodichloromethane	—	< 0.26	
Bromoform	—	< 0.38	
Carbon disulfide	—	< 0.2	
Carbon tetrachloride	500	< 0.4	
Chlorobenzene	100,000	< 0.24	
Chloroethane	—	< 0.5	
Chloroform	6000	< 0.31	
cis-1,2-Dichloroethylene	—	**29.7**	
cis-1,3-Dichloropropene	—	< 0.21	
Dibromochloromethane	—	< 0.36	
Ethylbenzene	—	< 0.28	
Methyl bromide	—	< 0.54	
Methyl chloride	—	< 0.53	
Methyl ethyl ketone	200,000	< 1.5	
Methylene chloride	—	< 2	
Styrene	—	< 0.23	
Tetrachloroethylene	700	**93.9**	
Toluene	—	< 0.2	
trans-1,2-Dichloroethylene	—	< 0.34	
trans-1,3-Dichloropropene	—	< 0.21	
Trichloroethylene	500	**5.9**	
Vinyl chloride	200	< 0.33	
Xylene (total)	—	< 0.66	
Semivolatile Organic Compounds by Method 8270D (µg/L)			
1,2,4-Trichlorobenzene	—	< 0.49	
1,2-Dichlorobenzene	—	< 0.49	
1,3-Dichlorobenzene	—	< 0.49	
1,4-Dichlorobenzene	7500	< 0.49	
2,4,5-Trichlorophenol	400,000	< 0.95	
2,4,6-Trichlorophenol	2000	< 0.54	
2,4-Dichlorophenol	—	< 0.56	
2,4-Dimethylphenol	—	< 0.49	
2,4-Dinitrophenol	—	< 5.3	
2,4-Dinitrotoluene	130	< 0.55	
2,6-Dinitrotoluene	—	< 0.61	
2-Chloronaphthalene	—	< 0.54	
2-Chlorophenol	—	< 0.5	
2-Methylnaphthalene	—	< 0.52	
2-Methylphenol	200,000	< 0.49	
2-Nitroaniline	—	< 1.1	
2-Nitrophenol	—	< 0.58	
3&4-Methylphenol	200,000	< 1.1	
3,3'-Dichlorobenzidine	—	< 0.87	
3-Nitroaniline	—	< 0.59	
4,6-Dinitro-o-cresol	—	< 1.9	
4-Bromophenyl phenyl ether	—	< 0.65	
4-Chloro-3-methyl phenol	—	< 0.49	
4-Chloroaniline	—	< 0.49	
4-Chlorophenyl phenyl ether	—	< 0.52	
4-Nitroaniline	—	< 0.74	
4-Nitrophenol	—	< 4.9	/R/c
Acenaphthene	—	< 0.49	
Acenaphthylene	—	< 0.49	
Anthracene	—	< 0.6	
Benzo(a)anthracene	—	< 0.62	
Benzo(a)pyrene	—	< 0.63	
Benzo(b)fluoranthene	—	< 0.69	

Table 5
Analytical Results for Investigation-Derived Waste Sample
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA Toxicity Characteristic	IDW FA19534-20 10/29/2014	
Semivolatile Organic Compounds by Method 8270D (µg/L)			
Benzo(g,h,i)perylene	—	< 0.78	
Benzo(k)fluoranthene	—	< 0.5	
Benzoic Acid	—	< 9.7	/R/c
Benzyl Alcohol	—	< 0.97	
bis(2-Chloroethoxy)methane	—	< 0.53	
bis(2-Chloroethyl)ether	—	< 0.67	
bis(2-Chloroisopropyl)ether	—	< 0.56	
bis(2-Ethylhexyl)phthalate	—	< 1.5	
Butyl benzyl phthalate	—	< 0.79	
Carbazole	—	< 0.6	
Chrysene	—	< 0.7	
Dibenzo(a,h)anthracene	—	< 0.79	
Dibenzofuran	—	< 0.52	
Diethyl phthalate	—	< 0.97	
Dimethyl phthalate	—	< 0.61	
Di-n-butyl phthalate	—	< 0.97	
Di-n-octyl phthalate	—	< 0.97	
Fluoranthene	—	< 0.68	
Fluorene	—	< 0.49	
Hexachlorobenzene	130	< 0.64	
Hexachlorobutadiene	500	< 0.49	
Hexachlorocyclopentadiene	—	< 0.97	
Hexachloroethane	3000	< 0.49	
Indeno(1,2,3-cd)pyrene	—	< 0.61	
Isophorone	—	< 0.49	
Naphthalene	—	< 0.49	
Nitrobenzene	2000	< 0.49	
N-Nitroso-di-n-propylamine	—	< 0.49	
N-Nitrosodiphenylamine	—	< 0.52	
Pentachlorophenol	100,000	< 4.9	
Phenanthrene	—	< 0.58	
Phenol	—	< 0.49	/R/c
Pyrene	—	< 0.79	
Metals by Method 6010C/7470B (µg/L)			
Aluminum	—	**4220**	
Antimony	—	**4.2**	***J//***
Arsenic	5000	< 2.4	
Barium	100000	**72.3**	***J//***
Beryllium	—	< 0.5	
Cadmium	1000	< 0.5	
Calcium	—	**33500**	
Chromium	5000	**14.4**	
Cobalt	—	**0.5**	***J//***
Copper	—	**2.4**	***J//***
Iron	—	**4950**	
Lead	5000	< 1.1	
Magnesium	—	**1150**	***J//***
Manganese	—	**67.6**	
Mercury	200	< 0.03	
Nickel	—	**3.7**	***J//***
Potassium	—	**4030**	***J//***
Selenium	1000	< 2.3	
Silver	5000	< 0.77	
Sodium	—	**13200**	
Thallium	—	< 2	
Vanadium	—	**6.7**	***J//***
Zinc	—	**18.5**	***J//***

Notes:
— - No Standard
IDW - Investigation Derived Waste
µg/L - micrograms per liter (parts per billion)
USEPA Toxicity Characteristic - United States Environmental Protection Agency Maximum Concentration of Contaminants for the Toxicity Characteristic (40CFR§261.24 Toxicity Characteristic, July 1, 2007).
Bold font and shading indicates the analyte was detected.
See Table 7 for explanation of data qualifiers.

Table 6
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Groundwater Field Duplicate Samples

Sample ID Laboratory ID Date Collected	MW-13D FA19534-18 10/29/14	MW-13D-A FA19534-23 10/29/14	Relative Percent Difference	MW-14D FA19534-1 10/28/14	MW-14D-A FA19534-2 10/28/14	Relative Percent Difference	MW-16 FA19534-14 10/29/14	MW-16-A FA19534-15 10/29/14	Relative Percent Difference
Volatile Organic Compounds by USEPA Method 8260 (µg/L)									
1,1,1-Trichloroethane	< 0.34	< 0.34	NC	< 0.34	< 0.34	NC	< 0.34	< 0.34	NC
1,1,2,2-Tetrachloroethane	< 0.27	< 0.27	NC	< 0.27	< 0.27	NC	< 0.27	< 0.27	NC
1,1,2-Trichloroethane	< 0.32	< 0.32	NC	< 0.32	< 0.32	NC	< 0.32	< 0.32	NC
1,1-Dichloroethane	< 0.26	< 0.26	NC	< 0.26	< 0.26	NC	< 0.26	< 0.26	NC
1,1-Dichloroethylene	**2**	**1.9**	5	**1.2**	**1**	18	< 0.25	< 0.25	NC
1,2-Dichloroethane	< 0.24	< 0.24	NC	< 0.24	< 0.24	NC	< 0.24	< 0.24	NC
1,2-Dichloropropane	< 0.36	< 0.36	NC	< 0.36	< 0.36	NC	< 0.36	< 0.36	NC
2-Hexanone	< 2	< 2	NC	< 2	< 2	NC	< 2	< 2	NC
4-Methyl-2-pentanone	< 1	< 1	NC	< 1	< 1	NC	< 1	< 1	NC
Acetone	< 11	< 11	NC	< 11	< 11	NC	< 11	< 11	NC
Benzene	< 0.24	< 0.24	NC	< 0.24	< 0.24	NC	< 0.24	< 0.24	NC
Bromodichloromethane	< 0.26	< 0.26	NC	< 0.26	< 0.26	NC	< 0.26	< 0.26	NC
Bromoform	< 0.38	< 0.38	NC	< 0.38	< 0.38	NC	< 0.38	< 0.38	NC
Carbon disulfide	< 0.2	< 0.2	NC	< 0.2	< 0.2	NC	< 0.2	< 0.2	NC
Carbon tetrachloride	< 0.4	< 0.4	NC	< 0.4	< 0.4	NC	< 0.4	< 0.4	NC
Chlorobenzene	< 0.24	< 0.24	NC	< 0.24	< 0.24	NC	< 0.24	< 0.24	NC
Chloroethane	< 0.5	< 0.5	NC	< 0.5	< 0.5	NC	< 0.5	< 0.5	NC
Chloroform	< 0.31	< 0.31	NC	< 0.31	< 0.31	NC	< 0.31	< 0.31	NC
cis-1,2-Dichloroethylene	< 0.33	< 0.33	NC	**0.65 J//**	**0.58 J//**	NC	< 0.33	< 0.33	NC
cis-1,3-Dichloropropene	< 0.21	< 0.21	NC	< 0.21	< 0.21	NC	< 0.21	< 0.21	NC
Dibromochloromethane	< 0.36	< 0.36	NC	< 0.36	< 0.36	NC	< 0.36	< 0.36	NC
Ethylbenzene	< 0.28	< 0.28	NC	< 0.28	< 0.28	NC	< 0.28	< 0.28	NC
Methyl bromide	< 0.54	< 0.54	NC	< 0.54	< 0.54	NC	< 0.54	< 0.54	NC
Methyl chloride	< 0.53	< 0.53	NC	< 0.53	< 0.53	NC	< 0.53	< 0.53	NC
Methyl ethyl ketone	< 1.5	< 1.5	NC	< 1.5	< 1.5	NC	< 1.5	< 1.5	NC
Methylene chloride	< 2	< 2	NC	< 2	< 2	NC	< 2	< 2	NC
Styrene	< 0.23	< 0.23	NC	< 0.23	< 0.23	NC	< 0.23	< 0.23	NC
Tetrachloroethylene	**47.6**	**60.7**	24	**79.3**	**64.2**	21	< 0.26	< 0.26	NC
Toluene	< 0.2	< 0.2	NC	< 0.2	< 0.2	NC	< 0.2	< 0.2	NC
trans-1,2-Dichloroethylene	< 0.34	< 0.34	NC	< 0.34	< 0.34	NC	< 0.34	< 0.34	NC
trans-1,3-Dichloropropene	< 0.21	< 0.21	NC	< 0.21	< 0.21	NC	< 0.21	< 0.21	NC
Trichloroethylene	< 0.3	< 0.3	NC	**0.56 J//**	**0.41 J//**	NC	< 0.3	< 0.3	NC
Vinyl chloride	< 0.33	< 0.33	NC	< 0.33	< 0.33	NC	< 0.33	< 0.33	NC
Xylene (total)	< 0.66	< 0.66	NC	< 0.66	< 0.66	NC	< 0.66	< 0.66	NC

Notes:
-A - Indicates a field duplicate sample.
NC - Not Calculated
RPD - Relative Percent Difference
Bold font and shading indicate the concentration is detected.
See Table 7 for explanation of data qualifiers.

Table 6
QA/QC Sampling Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	MW-1-C	MW-14D-C
Laboratory ID	FA19497-11	FA19534-22
Date Collected	10/27/14	10/28/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)		
1,1,1-Trichloroethane	< 0.34	< 0.34
1,1,2,2-Tetrachloroethane	< 0.27	< 0.27
1,1,2-Trichloroethane	< 0.32	< 0.32
1,1-Dichloroethane	< 0.26	< 0.26
1,1-Dichloroethylene	< 0.25	< 0.25
1,2-Dichloroethane	< 0.24	< 0.24
1,2-Dichloropropane	< 0.36	< 0.36
2-Hexanone	< 2	< 2
4-Methyl-2-pentanone	< 1	< 1
Acetone	< 11	< 11
Benzene	< 0.24	< 0.24
Bromodichloromethane	< 0.26	< 0.26
Bromoform	< 0.38	< 0.38
Carbon disulfide	< 0.2	< 0.2
Carbon tetrachloride	< 0.4	< 0.4
Chlorobenzene	< 0.24	< 0.24
Chloroethane	< 0.5	< 0.5
Chloroform	< 0.31	< 0.31
cis-1,2-Dichloroethylene	< 0.33	< 0.33
cis-1,3-Dichloropropene	< 0.21	< 0.21
Dibromochloromethane	< 0.36	< 0.36
Ethylbenzene	< 0.28	< 0.28
Methyl bromide	< 0.54	< 0.54
Methyl chloride	< 0.53	< 0.53
Methyl ethyl ketone	< 1.5	< 1.5
Methylene chloride	< 2	< 2
Styrene	< 0.23	< 0.23
Tetrachloroethylene	< 0.26	< 0.26
Toluene	< 0.2	< 0.2
trans-1,2-Dichloroethylene	< 0.34	< 0.34
trans-1,3-Dichloropropene	< 0.21	< 0.21
Trichloroethylene	< 0.3	< 0.3
Vinyl chloride	< 0.33	< 0.33
Xylene (total)	< 0.66	< 0.66

Notes:
-C - Indicates a trip blank.

Table 7
Definitions of Data Qualifiers
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Modifier	Description
<	Indicates not detected at the reporting limit indicated.
"/"	Separates the laboratory added data qualifiers from the validation data qualifiers. The laboratory added data qualifiers precede the first "/". The result qualifiers follow the first "/", and the analysis qualifiers follow the second "/". The result qualifiers are a product of the data validation process, and the analysis qualifier defines the type of QC excursion.

Laboratory Data Qualifiers

Qualifier	Description
J	Estimated concentration above the method detection limit and below the reporting limit.

Result Data Qualifiers

Qualifier	Description
M	A matrix effect was present.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Analysis Data Qualifiers

Qualifier	Description
c	Laboratory control recovery below the established criteria.
m	Matrix spike recovery below established criteria.

APPENDIX A

FIELD DOCUMENTATION

Daily Tailgate Safety Meeting Logs
Water Level Data Summary
Equipment Calibration Logs
Chain of Custody Forms
Field Data Information Logs for Groundwater Sampling
IDW Management Forms

AECOM

Tailgate Safety Meeting Log*

This sign-in log documents the topics of the tailgate safety briefing and individual attendance at the briefing. Personnel who perform work operations onsite are required to attend each safety briefing and acknowledge their ability to ask questions and receipt of such briefings daily. Please provide a brief narrative of the following topics as applicable to the Project.

Meeting Leader Randy Morgan	Signature Randy Morgan
Date /Time 10/27/14	Project Name & Location UTC Delavan Spray Technologies Site Bamberg, South Carolina
Weather Conditions cloudy	Project Number 60314964

Topic	*Discussion (Circle one)*
Today's Scope of Work (All tasks)	(yes) / NA
Schedule / New Work / Scope Changes	(yes) / NA
Reviewed Procedures, THA, etc.	(yes) / NA
Emergency Action Plan & Procedures	(yes) / NA
Communications Protocol	(yes) / NA
Required PPE	(yes) / NA
Required Monitoring / Instruments	(yes) / NA
Site Control / Work Zones / Security	(yes) / NA
Access / Egress / Slips, Trips, & Falls	(yes) / NA
Smoking, Eating, & Drinking	yes / (NA)
Washroom / Facililties Location	yes / (NA)
Heat/Cold Stress	yes / (NA)
Exclusion Areas Barricades / Cones	(yes) / NA
Required Permits, Passes, Keys, etc.	yes / (NA)
Decon Procedures / IDW Mngmt	yes / (NA)
Equipment Inspections /Safety Checklists	yes / (NA)

Comments/Other: Cardinal Rules: Confined Space ( ), GFCI ( ), Elevated Work ( ), Lockout/Tagout ( ), and Machine Guarding ( ). No loose/leather gloves near rotating equipment.

Tailgate Meeting Attendees

Printed Name	Signature
Justin Butler	[signature]

*This form is to be utilized for documenting daily safety meetings and stored with project files upon completion

AECOM

Tailgate Safety Meeting Log*

This sign-in log documents the topics of the tailgate safety briefing and individual attendance at the briefing. Personnel who perform work operations onsite are required to attend each safety briefing and acknowledge their ability to ask questions and receipt of such briefings daily. Please provide a brief narrative of the following topics as applicable to the Project.

Meeting Leader Justin Butler	Signature
Date /Time 10/28/14 0735	Project Name & Location UTC Delavan Spray Technologies Site Bamberg, South Carolina
Weather Conditions Clear 60's	Project Number 60314964

Topic	*Discussion (Circle one)*
Today's Scope of Work (All tasks)	(yes) / NA
Schedule / New Work / Scope Changes	(yes) / NA
Reviewed Procedures, THA, etc.	(yes) / NA
Emergency Action Plan & Procedures	(yes) / NA
Communications Protocol	(yes) / NA
Required PPE	(yes) / NA
Required Monitoring / Instruments	(yes) / NA
Site Control / Work Zones / Security	(yes) / NA
Access / Egress / Slips, Trips, & Falls	(yes) / NA
Smoking, Eating, & Drinking	(yes) / NA
Washroom / Facililties Location	(yes) / NA
Heat/Cold Stress	(yes) / NA
Exclusion Areas Barricades / Cones	(yes) / NA
Required Permits, Passes, Keys, etc.	(yes) / NA
Decon Procedures / IDW Mngmt	(yes) / NA
Equipment Inspections /Safety Checklists	(yes) / NA

Comments/Other: Cardinal Rules: Confined Space (✓), GFCI (✓), Elevated Work (✓), Lockout/Tagout (✓), and Machine Guarding (✓). No loose/leather gloves near rotating equipment.

Tailgate Meeting Attendees

Printed Name	Signature
Randy Morgan	Randy Morgan

*This form is to be utilized for documenting daily safety meetings and stored with project files upon completion

AECOM

Tailgate Safety Meeting Log*

This sign-in log documents the topics of the tailgate safety briefing and individual attendance at the briefing. Personnel who perform work operations onsite are required to attend each safety briefing and acknowledge their ability to ask questions and receipt of such briefings daily. Please provide a brief narrative of the following topics as applicable to the Project.

Meeting Leader Justin Butler	Signature Just Butler
Date /Time 10/29/14 0730	Project Name & Location UTC Delavan Spray Technologies Site Bamberg, South Carolina
Weather Conditions Partly Cloudy 60's	Project Number 60314964

Topic	*Discussion (Circle one)*
Today's Scope of Work (All tasks)	(yes) / NA
Schedule / New Work / Scope Changes	(yes) / NA
Reviewed Procedures, THA, etc.	(yes) / NA
Emergency Action Plan & Procedures	(yes) / NA
Communications Protocol	(yes) / NA
Required PPE	(yes) / NA
Required Monitoring / Instruments	(yes) / NA
Site Control / Work Zones / Security	(yes) / NA
Access / Egress / Slips, Trips, & Falls	(yes) / NA
Smoking, Eating, & Drinking	(yes) / NA
Washroom / Facililties Location	(yes) / NA
Heat/Cold Stress	(yes) / NA
Exclusion Areas Barricades / Cones	(yes) / NA
Required Permits, Passes, Keys, etc.	(yes) / NA
Decon Procedures / IDW Mngmt	(yes) / NA
Equipment Inspections /Safety Checklists	(yes) / NA

Comments/Other: Cardinal Rules: Confined Space (✓), GFCI (✓), Elevated Work (✓), Lockout/Tagout (✓), and Machine Guarding (✓). No loose/leather gloves near rotating equipment.

Tailgate Meeting Attendees

Printed Name	Signature
Randy Morgan	Randy Morgan

*This form is to be utilized for documenting daily safety meetings and stored with project files upon completion

WATER LEVEL DATA SUMMARY

PROJECT: UTC Delavan Spray Technologies Site

JOB NUMBER: 60314964

LOCATION: Bamberg, South Carolina

DATE: 10/27/14

CLIENT: UTC

MEASURED BY: R Morgan / J Butler

SURVEY DATUM:

MEASUING DEVICE: PID Background 0.1

MEASUREMENT POINT IDENTIFICATION	TOC ELEVATION (FT MSL)	DEPTH TO BOTTOM OF WELL (FT BTOC)	POINT OF MEASURE	DEPTH TO WATER (FT BTOC)	COMMENTS
MW-1				13.53	PID: 1.0 No bolts/stripped off
MW-2				13.63	PID: 0.2 No bolts
MW-3				14.16	PID: 0.0 No bolts/stripped
MW-3D				16.07	PID: 0.0
MW-3D1				15.89	PID: 0.0
* MW-4				11.70	PID: 0.0 No bolts/stripped off
MW-5				11.43	PID: 0.0
* MW-6				5.96	PID: 0.0
* MW-7				~~5.96~~ 14.73	PID: 0.0
MW-8				13.02	PID: 0.6
MW-9				9.78	PID: 1.6
* MW-9D				11.64	PID: 0.0
MW-10				8.50	PID: 0.8 1 bolt/other stripped off
MW-10D				9.40	PID: 0.4
* MW-11				8.96	PID: 0.0
MW-12D				15.55	PID: 0.5
MW-13D				14.29	PID: 0.0
MW-14				13.02	PID: 0.0
MW-14D				14.99	PID: 0.0
MW-15				4.49	PID: 0.6
MW-15D				3.79	PID: 0.0
MW-15D1				3.91	PID: 0.0
MW-16				6.68	PID: 0.0
MW-16D				6.76	PID: 0.0
MW-17				6.93	PID: 0.0
MW-18				12.48	PID: 0.0

Notes:

BTOC - Below Top of Casing MSL - Mean Sea Level TOC - Top of Casing LLMH - Lower Lip of Man Hole

WATER LEVEL DATA SUMMARY

PROJECT: UTC Delavan Spray Technologies Site

JOB NUMBER: 60314964

LOCATION: Bamberg, South Carolina

DATE:

CLIENT: UTC

MEASURED BY:

SURVEY DATUM:

MEASUING DEVICE:

MEASUREMENT POINT IDENTIFICATION	TOC ELEVATION (FT MSL)	DEPTH TO BOTTOM OF WELL (FT BTOC)	POINT OF MEASURE	DEPTH TO WATER (FT BTOC)	COMMENTS
MW-19				14.42	PID 217.9 well head PID BG 3.3 ~~well head~~ Breathing zone
MW-20				14.30	PID 15.3 PID Breathing zone 10.2
MW-21				14.59	PID: 162.5
MW-21D				14.84	PID: 0.6
MW-22D				14.19	PID: 0.7
MW-23D				16.18	PID: 0.5

Notes:

BTOC - Below Top of Casing MSL - Mean Sea Level TOC - Top of Casing LLMH - Lower Lip of Man Hole

YSI 556 MPS / Water Quality Calibration Certificate

AECOM

Cal Standard — Temp, LAB, C : 20.73 — Temp, FIELD, C :

Conductivity	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
1413 UMHO/CM @ 25C	7405352	6/15	1.278		(+/- .5%)

PH 4.00	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
@ 25C	740972	9/15	4.00		(+/- 0.2 units)

PH 7.01	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
@ 25C	7409179	9/16	7.01		(+/- 0.2 units)

PH 10.01	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
@ 25C	7408054	7/16	10.02		(+/- 0.2 units)

ORP ZOBELLS	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
231.0 MV @ 25C	7410186	1/15	237.5		(+/- 20 MV)

Dissolved Oxygen (Saturated Air)		Temp, C	% Saturation	mg/L	Acceptable Range
	Post-Cal, LAB	21.14	96.8	8.62	(+/- 2%) / (+/- 2%)
	Post-Cal, FIELD				

New DO Membrane: [X] Yes [ ] No

Do Cap Color: [ ] Black [●] Blue [ ] Yellow

Model 556 — S/N 05D1437AR — Cable 12 J50

Calibration referenced to the temperature of the calibration standards.

Turbidity	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
.02 NTU	40101	JAN-16	0.02		(.0196 to .0204)
10 NTU	40763	JUL-16	10.02		(9.8 to 10.2)
1000 NTU	21174	NOV-14	985.0		(970 to 1031)

Model Micro TPW — S/N 20071199

Calibrated By: Eric Olson — Date of Calibration: 10-17-14

Project Name: UTC — Project number: 60314964.5

Signed : [signature]

REV-5, 1/12/2012 EKO

YSI 556 MPS / Water Quality Calibration Certificate

AECOM

Cal Standard Temp, LAB, C : 21.25 Temp, FIELD, C :

Conductivity	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
1413 UMHO/CM @ 25C	7405352	6/15	1.278		(+/- .5%)

PH 4.00	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
@ 25C	740972	9/15	4.00		(+/- 0.2 units)

PH 7.01	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
@ 25C	7409179	9/16	7.00		(+/- 0.2 units)

PH 10.01	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
@ 25C	7408054	7/16	10.01		(+/- 0.2 units)

ORP ZOBELLS	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
231.0 MV @ 25C	7410186	1/15	237.5		(+/- 20 MV)

Dissolved Oxygen (Saturated Air)		Temp, C	% Saturation	mg/L	Acceptable Range
	Post-Cal, LAB	22.08	96.5	8.42	(+/- 2%) / (+/- 2%)
	Post-Cal, FIELD				

New DO Membrane: ○ Yes ⊗ No

Do Cap Color: ○ Black ◉ Blue ○ Yellow

Model 556 S/N 09A130728 Cable 146-33

Calibration referenced to the temperature of the calibration standards.

Turbidity	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
.02 NTU	40701	JUL-16	0.02		(.0196 to .0204)
10 NTU	40763	JUL-16	10.01		(9.8 to 10.2)
1000 NTU	40703	JUL-16	1002		(970 to 1031)

Model Micro TPW S/N 20071197

Calibrated By Eric Olson Date of Calibration 10-16-14

Project Name UTC Project number 60314964.5

Signed : [signature]

REV-5, 1/12/2012 EKO

Photo / Flame-Ionization Detector Calibration Certificate

AECOM

Cal Standard

PID Isobutylene	Lot #	Expiration	Post-Cal Reading	Acceptable Range
100 ppm	1678302	MAY-17	102	98 - 102

FID Methane	Lot #	Expiration	Post-Cal Reading	Acceptable Range
100 ppm		N/A		98 - 102

Pump Flow mL/min	Acceptable Range
310	350 - 450

Model: MiniRAE 3K S/N: 592-910624

Lamp: 10.6

Project Name: UTC

Project #: 60314964.5

Calibrated By: Eric Olson Date of Calibration: 10-22-14

Signed: [signature]

Photo / Flame-Ionization Detector Calibration Certificate

AECOM

Cal Standard

PID Isobutylene	Lot #	Expiration	Post-Cal Reading	Acceptable Range
100 ppm	1678302	MAY-17	99.2	98 - 102

FID Methane	Lot #	Expiration	Post-Cal Reading	Acceptable Range
100 ppm		N/A		98 - 102

Pump Flow mL/min	Acceptable Range
360	350 - 450

Model MiniRAE 2k **S/N** 110-012301

Lamp 10.6

Project Name: UTC

Project #: 60314964.5

Calibrated By: Eric Olson

Date of Calibration: 10-24-14

Signed: [signature]

EQUIPMENT CALIBRATION DAILY LOG

Project Name: UTC Delaware Spray Tech.	Project Number: 603149645
Model: Mini Rae 3000	Bulb: 10.6 meV

PID	Date: 10-27-14	Recorded By: Randy Morgan			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #: S/N 592-910624						
	Parameter	Standard	Exp. Date	Lot #	Time: 1020	Time:	Time:
					Initials: RM	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: 0.0 ppm	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	~~Lot #1678302~~ 100 ppm (isobutylene)	May 2017	Lot # 1678302	Value: 101.0 ppm	Value:	Value:

PID	Date: 10-28-14	Recorded By: Randy Morgan			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #: S/N 592-910624						
	Parameter	Standard	Exp. Date	Lot #	Time: 0725	Time:	Time:
					Initials: RM	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: 0.0 ppm	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100.0 (isobutylene)	May 2017	Lot # 1678302	Value: 100.0 ppm	Value:	Value:

PID	Date: 10-29-14	Recorded By: Randy Morgan			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #: 592-910624						
	Parameter	Standard	Exp. Date	Lot #	Time: 0742	Time:	Time:
					Initials: RM	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: 0.0 ppm	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100.0 ppm (isobutylene)	May 2017	Lot # 1678302	Value: 100.0 ppm	Value:	Value:

PID	Date:	Recorded By:			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:

First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	(isobutylene)			Value:	Value:	Value:

Additional Remarks:

EQUIPMENT CALIBRATION DAILY LOG

Project Name:	UTC Delaware Spray Technologies site	**Project Number:**	60314964
Model:	PGM 7600 110-012301	**Bulb:**	meV

PID	Date: 10/28/14	Recorded By: Justin Butler			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	**Time:** 0750	**Time:**	**Time:**
					Initials: JB	**Initials:**	**Initials:**
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: 0.0 ppm	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100.0 (isobutylene)	May 2017	Lot # 1678302	Value: 100.0	Value:	Value:

PID	Date: 10/29/14	Recorded By: Justin Butler			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	**Time:** 0740	**Time:**	**Time:**
					Initials: JB	**Initials:**	**Initials:**
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: 0.0 ppm	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100.0 (isobutylene)	May 2017	Lot # 1678302	Value: 100 ppm	Value:	Value:

PID	Date:	Recorded By:			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	**Time:**	**Time:**	**Time:**
					Initials:	**Initials:**	**Initials:**
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	(isobutylene)			Value:	Value:	Value:

PID	Date:	Recorded By:			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	**Time:**	**Time:**	**Time:**
					Initials:	**Initials:**	**Initials:**

First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	(isobutylene)			Value:	Value:	Value:

Additional Remarks:

AECOM

Project Name: UTC

Project Number: 60314964.5

Calibrated By: Randy Morgan

Signature: Randy Morgan

YSI 556 SN: 05D1437AR

Turbidimeter Model/SN: MicroTPW ~~60314964~~ 200711195

Additional Equipuipment/SN:

Date: 10-27-14

Operation Notes

1) Turn meter on in Run mode and allow to warm up 10-15 minutes prior to calibration 2) Observe DO% for 2-3 minutes when meter is initialy turned on 3) The unit should display decreasing values until it is stabilized near 100% 4) If the meter does not stabilize at/near 100%, indicates the D.O sensor requires maintainance

These values should be keyed in when calibrating a water quality meter. Be sure to use the temperature of the standards not ambient temperature and the temperature sensor is submerged in solution.

Table 1: Calibration Values At Various Temeratures

Temp., C	PH 4	PH 7	PH 10	Conductivity	ORP
5	4.00	7.07	10.19	896.00	257.00
10	4.00	7.06	10.16	1020.00	250.50
15	4.00	7.04	10.10	1147.00	244.00
20	4.00	7.02	10.05	1278.00	237.50
25	4.00	7.01	10.01	1413.00	231.00
30	4.00	6.99	9.96	1548.00	224.50

mm Hg = Millimeters of Mercury Note that the YSI 556 uses this information ONLY when the DO calibration is being done. After calibration is complete it no longer corrects for pressure change. Verify the meter is correct for your altitude when calibrating

Table 2: Atmospheric Pressure / Altitude Table

Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)
0	760	1126	730	2290	699
278	752	1413	722	2587	692
558	745	1703	714	2887	684
841	737	1995	707	3190	676

Table 3: DO% Saturation VS. Temperature

Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO
15	10.084	20	9.092	25	8.263	30	7.559	35	6.950
16	9.870	21	8.916	26	8.113	31	7.430	36	6.837
17	9.665	22	8.743	27	7.966	32	7.305	37	6.727
18	9.467	23	8.578	28	7.827	33	7.183	38	6.620
19	9.276	24	8.418	29	7.691	34	7.065	39	6.515

YSI 556 Calibration

Parameter	Before Calibration	After Calibration	Time	Units
Barametric Pressure	755.7		0923	mmHg
Temperature (Saturated Air)	15.02	15.25	0923	c
Temperature (Calibration Solution)	15.28	16.03	0945	c
D.O.	10.38	9.98	0923	mg/L
PH 7	7.09	7.04	0933	SU
PH 4	3.92	4.00	0937	SU
PH 10	9.94	10.07	0941	SU
Specific Conductance	1.297	1.278	0929	mS/cm
ORP	246.3	244.0	0945	mV

MicroTPW Calibration

Calibrations performed 0.02, 10, and 1000 NTU	Calibrations accepted:	YES NO (Circle One)

AECOM

Project Name: UTC
Project Number: 60314964.5
Calibrated By: Kenny Morgan
Signature: Kenny Morgan

YSI 556 SN: 09A130728
Turbidimeter Model/SN: MicroTPW 20071197
Additional Equipment/SN:
Date: 10-27-14

Operation Notes
1) Turn meter on in Run mode and allow to warm up for 15 minutes prior to calibration 2) Observe DO% for 2-3 minutes when meter is initially turned on 3) The unit should display decreasing values until it is stabilized near-100% 4) If the meter does not stabilize at/near 100%, indicates the D.O. sensor requires maintainence

These values should be keyed in when calibrating a water quality meter. Be sure to use the temperature of the standards not ambient temperature and the temperature sensor is submerged in solution

Table 1: Calibration Values At Various Temeratures

Temp., C	PH 4	PH 7	PH 10	Conductivity	ORP
5	4.00	7.07	10.19	896.00	257.00
10	4.00	7.06	10.16	1020.00	250.50
15	4.00	7.04	10.10	1147.00	244.00
20	4.00	7.02	10.05	1278.00	237.50
25	4.00	7.01	10.01	1413.00	231.00
30	4.00	6.99	9.96	1548.00	224.50

mm Hg = Millimeters of Mercury Note that the YSI 556 uses this information ONLY when the DO calibration is being done. After calibration is complete it no longer corrects for pressure change Verify the meter is correct for your altitude when calibrating.

Table 2: Atmospheric Pressure / Altitude Table

Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)
0	760	1126	730	2290	699
278	752	1413	722	2587	692
556	745	1703	714	2887	684
841	737	1995	707	3190	676

Table 3: DO% Saturation VS. Temperature

Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO
15	10.084	20	9.092	25	8.263	30	7.559	35	6.950
16	9.870	21	8.915	26	8.113	31	7.430	36	6.837
17	9.665	22	8.743	27	7.968	32	7.305	37	6.727
18	9.467	23	8.578	28	7.627	33	7.183	38	6.620
19	9.276	24	8.418	29	7.691	34	7.065	39	6.515

YSI 556 Calibration

Parameter	Before Calibration	After Calibration	Time	Units
Barametric Pressure	756.3		0920	mmHg
Temperature (Saturated Air)	15.01	15.24	0920	c
Temperature (Calibration Solution)	15.74	16.19	0940	c
D.O.	10.51	9.99	0920	mg/L
PH 7	7.07	7.04	0928	SU
PH 4	3.94	4.00	0932	SU
PH 10	9.96	10.08	0936	SU
Specific Conductance	1.277	1.147	0925	mS/cm
ORP	246.5	244.0	0940	mV

MicroTPW Calibration

Calibrations performed 0.02, 10, and 1000 NTU	Calibrations accepted: YES NO (Circle One)

AECOM

Project Name: UTC

Project Number:

Calibrated By: Randy Morgan

Signature: Randy Morgan

YSI 556 SN:

Turbidimeter Model/SN: MicroTPW

Additional Equipulpment/SN:

Date: Oct 28, 2014

Operation Notes:
1) Turn meter on in Run mode and allow to warm up 10-15 minutes prior to calibration. 2) Observe DO% for 2-3 minutes when meter is initialy turned on 3) The unit should display decreasing values until it is stabilized near-100% 4) If the meter does not stabilize at/near 100%, indicates the D.O. sensor requires maintainence

These values should be keyed in when calibrating a water quality meter. Be sure to use the temperature of the standards not ambient temperature and the temperature sensor is submerged in solution.

Table 1: Calibration Values At Various Temeratures

Temp., C	PH 4	PH 7	PH 10	Conductivity	ORP
5	4.00	7.07	10.19	896.00	257.00
10	4.00	7.06	10.16	1020.00	250.50
15	4.00	7.04	10.10	1147.00	244.00
20	4.00	7.02	10.05	1278.00	237.50
25	4.00	7.01	10.01	1413.00	231.00
30	4.00	6.99	9.96	1548.00	224.50

mm Hg = Millimeters of Mercury. Note that the YSI 556 uses this information ONLY when the DO calibration is being done. After calibration is complete it no longer corrects for pressure change. Verify the meter is correct for your altitude when calibrating.

Table 2: Atmospheric Pressure / Altitude Table

Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)
0	760	1126	730	2290	699
278	752	1413	722	2587	692
558	745	1703	714	2887	684
841	737	1995	707	3190	676

Table 3: DO% Saturation VS. Temperature

Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO
15	10.084	20	9.092	25	8.263	30	7.559	35	6.950
16	9.870	21	8.915	26	8.113	31	7.430	36	6.837
17	9.665	22	8.743	27	7.968	32	7.305	37	6.727
18	9.467	23	8.578	28	7.827	33	7.183	38	6.620
19	9.276	24	8.418	29	7.691	34	7.065	39	6.515

YSI 556 Calibration

Parameter	Before Calibration	After Calibration	Time	Units
Barametric Pressure	761.7		0715	mmHg
Temperature (Saturated Air)	17.69	17.89	0715	c
Temperature (Calibration Solution)	18.80	18.60	0735	c
D.O.	9.07	9.51	0715	mg/L
PH 7	7.14	7.02	7.02	SU
PH 4	3.92	4.00	~~4.00~~ RM	SU 0726
PH 10	9.89	10.02	0730	SU
Specific Conductance	1.126	1.278	0719	mS/cm
ORP	239.7	237.5	0735	mV

MicroTPW Calibration

Calibrations performed 0.02, 10, and 1000 NTU	Calibrations accepted: YES NO (Circle One)

AECOM

Field Calibration Log

Project Name: DTC Delavan Spray Technologies Site
Project Number: 60314964
Calibrated By: Justin Butler
Signature: [signature]

Water Quality Meter Model/SN: 05 D1437 AR
Turbidity Meter Model/SN: 20071199
Additional Equipment Model/SN:
Date: 10/28/14

Operation Notes:
1) Turn meter on in Run mode and allow to warm up 10 to 15 minutes prior to calibration.
2) Observe DO % for 2-3 minutes when meter is initially turned on. The unit should display decreasing values until it is stabilized near 100%.
3) If the meter does not stabilize at/near 100%, indicates the DO sensor requires maintenance.

These values should be keyed in when calibrating a water quality meter.
Be sure to use the temperature of the standards, not ambient temperature; and be sure the temperature sensor is submerged in the solution.

Table 1: Calibration Values At Various Temperatures

Temp. C	pH 4	pH 7	pH 10	Conductivity	ORP
5	4.00	7.07	10.19	896.00	257.00
10	4.00	7.06	10.16	1020.00	250.50
15	4.00	7.04	10.10	1147.00	244.00
20	4.00	7.02	10.05	1278.00	237.50
25	4.00	7.01	10.01	1413.00	231.00
30	4.00	6.99	9.96	1548.00	224.50

mm Hg = millimeters of mercury. Note that the most water quality meters use this information ONLY when the DO calibration is being done.
After calibration is complete it no longer corrects for pressure change. Verify the meter is correct for your altitude when calibrating.

Table 2: Atmospheric Pressure / Altitude Table

Altitude feet (amsl)	Pressure (mmHg)	Altitude feet (amsl)	Pressure (mmHg)	Altitude feet (amsl)	Pressure (mmHg)
0	760	1126	730	2290	699
278	752	1413	722	2587	692
558	745	1703	714	2887	684
841	**737**	1995	707	3190	676

Table 3: DO % Saturation Vs. Temperature

Temp C.	DO	Temp C.	DO	Temp C.	DO	Temp C.	DO	Temp C.	DO
15	10.084	20	9.092	25	8.263	30	7.559	35	6.950
16	9.870	21	8.915	26	8.113	31	7.430	36	6.837
17	9.665	22	8.743	27	7.968	32	7.305	37	6.727
18	9.467	23	8.578	28	7.827	33	7.183	38	6.620
19	9.276	24	8.418	29	7.691	34	7.065	39	6.515

Water Quality Meter Calibration

Parameter	Before Calibration	After Calibration	Time	Units
Barometric Pressure	762.3		0755	mmHg
Temperature (Saturated Air)	22.92	22.80	0808	C
Temperature (Calibration Solution)	19.76	19.91	0805	C
DO	10.03	8.58	0755	mg/L
pH 7	7.23	7.02	0759	SU
pH 4	4.00	4.00	0801	SU
pH 10	9.85	10.02	0803	SU
Specific Conductance	1.467	1.278	0757	mS/cm
ORP	228.2	237.5	0805	mV

Turbidity Meter Calibration

Calibrations performed 0.02, 10, and 1,000 NTU	Calibrations accepted:	Yes	No
		circle one	

Calibration Solutions

Parameter	Manufacturer	Standard	Lot #	Expiration
pH 4.00		4.00 SU		
pH 7.01		7.01 SU		
pH 10.06		10.06 SU		
Specific Conductivity		1.413 mS/cm		
ORP		237.5 mV		
Turbidity		0.02 NTU		
Turbidity		10 NTU		
Turbidity		1,000 NTU		

AECOM

Project Name: UTC Delaware

Project Number:

Calibrated By: Randy Morgan

Signature: Randy Morgan

YSI 556 SN:

Turbidimeter Model/SN: MicroTPW

Additional Equipulpment/SN:

Date: Oct 29, 2014

Operation Notes:
1) Turn meter on in Run mode and allow to warm up 10-15 minutes prior to calibration. 2) Observe DO% for 2-3 minutes when meter is initialy turned on 3) The unit should display decreasing values until it is stabilized near-100% 4) If the meter does not stabilize at/near 100%, indicates the D.O. sensor requires maintainence

These values should be keyed in when calibrating a water quality meter. Be sure to use the temperature of the standards not ambient temperature and the temperature sensor is submerged in solution.

Table 1: Calibration Values At Various Temeratures

Temp., C	PH 4	PH 7	PH 10	Conductivity	ORP
5	4.00	7.07	10.19	896.00	257.00
10	4.00	7.06	10.16	1020.00	250.50
15	4.00	7.04	10.10	1147.00	244.00
20	4.00	7.02	10.05	1278.00	237.50
25	4.00	7.01	10.01	1413.00	231.00
30	4.00	6.99	9.96	1548.00	224.50

mm Hg = Millimeters of Mercury. Note that the YSI 556 uses this information ONLY when the DO calibration is being done. After calibration is complete it no longer corrects for pressure change. Verify the meter is correct for your altitude when calibrating.

Table 2: Atmospheric Pressure / Altitude Table

Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)	Altitude feet (asl)	Pressure (mmHG)
0	760	1126	730	2290	699
278	752	1413	722	2587	692
558	745	1703	714	2887	684
841	737	1995	707	3190	676

Table 3: DO% Saturation VS. Temperature

Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO	Temp C	DO
15	10.084	20	9.092	25	8.263	30	7.559	35	6.950
16	9.870	21	8.915	26	8.113	31	7.430	36	6.837
17	9.665	22	8.743	27	7.968	32	7.305	37	6.727
18	9.467	23	8.578	28	7.827	33	7.183	38	6.620
19	9.276	24	8.418	29	7.691	34	7.065	39	6.515

YSI 556 Calibration

Parameter	Before Calibration	After Calibration	Time	Units
Barametric Pressure	760.6		0716	mmHg
Temperature (Saturated Air)	18.63	18.55	0716	c
Temperature (Calibration Solution)	20.46	20.05	0736	c
D.O.	9.06	9.37	0716	mg/L
PH 7	7.08	7.02	0724	SU
PH 4	4.00	4.00	0728	SU
PH 10	10.01	10.04	0732	SU
Specific Conductance	1.288	1.278	0720	mS/cm
ORP	234.1	237.5	0736	mV

MicroTPW Calibration

Calibrations performed 0.02, 10, and 1000 NTU	Calibrations accepted: YES NO (Circle One)

AECOM

Field Calibration Log

Project Name: OTC Delavan Spray Technologies site
Project Number: 60314964
Calibrated By: Justin Butler
Signature: Just Ate

Water Quality Meter Model/SN: OSD1437AR
Turbidity Meter Model/SN: 200711199
Additional Equipment Model/SN:
Date: 10/29/14

Operation Notes:
1) Turn meter on in Run mode and allow to warm up 10 to 15 minutes prior to calibration.
2) Observe DO % for 2-3 minutes when meter is initially turned on. The unit should display decreasing values until it is stabilized near 100%.
3) If the meter does not stabilize at/near 100%, indicates the DO sensor requires maintenance.

These values should be keyed in when calibrating a water quality meter.
Be sure to use the temperature of the standards, not ambient temperature; and be sure the temperature sensor is submerged in the solution.

Table 1: Calibration Values At Various Temperatures

Temp. C	pH 4	pH 7	pH 10	Conductivity	ORP
5	4.00	7.07	10.19	896.00	257.00
10	4.00	7.06	10.16	1020.00	250.50
15	4.00	7.04	10.10	1147.00	244.00
20	4.00	7.02	10.05	1278.00	237.50
25	4.00	7.01	10.01	1413.00	231.00
30	4.00	6.99	9.96	1548.00	224.50

mm Hg = millimeters of mercury. Note that the most water quality meters use this information ONLY when the DO calibration is being done.
After calibration is complete it no longer corrects for pressure change. Verify the meter is correct for your altitude when calibrating.

Table 2: Atmospheric Pressure / Altitude Table

Altitude feet (amsl)	Pressure (mmHg)	Altitude feet (amsl)	Pressure (mmHg)	Altitude feet (amsl)	Pressure (mmHg)
0	760	1126	730	2290	699
278	752	1413	722	2587	692
558	745	1703	714	2887	684
841	**737**	1995	707	3190	676

Table 3: DO % Saturation Vs. Temperature

Temp C.	DO	Temp C.	DO	Temp C.	DO	Temp C.	DO	Temp C.	DO
15	10.084	20	9.092	25	8.263	30	7.559	35	6.950
16	9.870	21	8.915	26	8.113	31	7.430	36	6.837
17	9.665	22	8.743	27	7.968	32	7.305	37	6.727
18	9.467	23	8.578	28	7.827	33	7.183	38	6.620
19	9.276	24	8.418	29	7.691	34	7.065	39	6.515

Water Quality Meter Calibration

Parameter	Before Calibration	After Calibration	Time	Units
Barometric Pressure	759.9		0740	mmHg
Temperature (Saturated Air)	18.52	18.47	0753	C
Temperature (Calibration Solution)	18.72	18.43	0750	C
DO	8.37	9.27	0740	mg/L
pH 7	7.07	7.02	0744	SU
pH 4	3.97	4.00	0746	SU
pH 10	9.93	10.03	0748	SU
Specific Conductance	1.262	1.278	0742	mS/cm
ORP	242.2	237.5	0750	mV

Turbidity Meter Calibration

Calibrations performed 0.02, 10, and 1,000 NTU	Calibrations accepted: (Yes) No — circle one

Calibration Solutions

Parameter	Manufacturer	Standard	Lot #	Expiration
pH 4.00		4.00 SU		
pH 7.01		7.01 SU		
pH 10.06		10.06 SU		
Specific Conductivity		1.413 mS/cm		
ORP		237.5 mV		
Turbidity		0.02 NTU		
Turbidity		10 NTU		
Turbidity		1,000 NTU		

AECOM PO# 56785ACM

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60314964
Chain of Custody Number [1]: 10272014-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site, Bamberg SC

Client Name: UTC

Collected by: R. Morgan, J Butler

Project Manager: Walter Gerald 804-234-8925

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310D)	N Nitrate, Nitrite, Sulfate, Chloride (9056)	Methane, Ethane, Ethene (RSK175)	SVOCs (8270D)	TAL Metals (6010D)	Cadmium (6010B)					Quality Assurance Samples	Cooler ID
MW-1	27-Oct-2014	1635		X		Groundwater	X												
MW-2	27-Oct-2014	1708		X			X												
MW-19	28-Oct-2014	0843		X			X	X	X	X									
MW-21D	28-Oct-2014	0850		X			X	X	X	X									
MW-21	28-Oct-2014	1005		X			X	X	X	X									
MW-20	28-Oct-2014	1100		X			X	X	X	X									
MW-8	28-Oct-2014	1165		X			X	X	X	X									
MW-5	28-Oct-2014	1205		X			X	X	X	X									
MW-~~220~~ 14	28-Oct-2014	1330		X			X	X	X	X									
MW-22D	28-Oct-2014	1350		X			X	X	X	X									
MW-1-C	27-Oct-2014	1635		X			X												

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Randy Morgan	10-28-14	1500	1.		
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped: XXX
Method of Shipment: FedEx Airbill #: 8063 1183 8040
Analytical Lab: Accutest Location: Orlando FL
Lab Recipient: _____ Date: _____ Time: _____

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

VOCs by 8260B – unpreserved vials – 7 day holding time
Nitrate/Nitrite – 48 hr holding time

AECOM chemist: Dori Cullom
804-234-8922 doria.cullom@aecom.com

52745\admin\project control\project forms\Blank COC

AECOM

AECOM PO# 56785ACM

Chain of Custody and Analytical Request

Page 1 of 2

Project Number: 60314964

Chain of Custody Number (1): 10272014-01

LIMS Number:

Project Name / Location: UTC Delaware Spring Technologies Site, Bamberg SC

Client Name: UTC

Collected by: P. Morgan, J Butler

Project Manager: Walter Gerald 864-234-8925

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310B)	N Nitrate, Nitrite, Sulfate, Ethanol, Methane, Ethane, Ethene (300.0)	SVOCs (1627 Mod)	TAL Metals (6010C/7470B)							Quality Assurance Samples: COMMENTS	Cooler ID
MW-14D	28-oct-2014	1435		X			X												
MW-14D-c	28-oct-2014	1435		X			X											Lab provided Trip Blank	
MW-14D-a	28-oct-2014	1435		X			X												
MW-33D	28-oct-2014	1540		X			X												
MW-3	28-oct-2014	1545		X			X												
MW-3D	28-oct-2014	1625		X			X												
MW-3D1	28-oct-2014	1700		X			X												
MW-17	29-oct-2014	0840		X			X												
MW-15	29-oct-2014	0843		X			X												
MW-15D	29-oct-2014	0927		X			X												
MW-18	29-oct-2014	0935		X			X												
MW-15D1	29-oct-2014	1020		X			X												
MW-10D	29-oct-2014	1025		X			X												
MW-10	29-oct-2014	1125		X			X												
MW-16	29-oct-2014	1137		X			X												

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	10/29/14	1530			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: Shipped:

Method of Shipment: FedEx Airbill #: 8063 1883 8039

Analytical Lab: Accutest Location: Orlando FL

Lab Recipient: Date: Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

TCL VOCs by 8260B – unpreserved vials – 7 day holding time

Nitrate/Nitrite – 48 hr holding time

AECOM chemist: Dori Cullom

864-234-8922 doria.cullom@aecom.com

52745\chain\project custody project form\Blank COC

AECOM PO# 56785ACM

Page 2 of 2

Project Number: 60314964

Chain of Custody Number [1]: 10292014-01

LIMS Number:

AECOM Chain of Custody and Analytical Request

Project Name / Location: UTC Delaware Spray Technologies Site, Bamberg SC

Client Name: UTC

Collected by: R Morgan, J Butler

Project Manager: Walter Gerald 864-234-8925

Sample ID	Date Collected (dd mmm yyyy)	Time Collected (Military) (hhmm)	See Comments: COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310D)	N. nitrate, Nitrite, Sulfate, Chloride (9056)	Methane, Ethane, Ethene (RSK 175)	SVOCs (8270D)	TPH Metals (6010C/7470B)						Quality Assurance Samples: COMMENTS	Cooler ID
MW-16-a	29-oct-2014	1137		X			X												
MW-16D	29-oct-2014	1218		X			X												
MW-9	29-oct-2014	1240		X			X												
MW-9-MS	29-oct-2014	1240		X			X												
MW-9-MSD	29-oct-2014	1240		X			X												
MW-13D	29-oct-2014	1415		X			X												
MW-12D	29-oct-2014	1448		X			X												
IDW	29 oct-2014	1510		X			X				X	X							
Potable-1	29-oct-2014	1520		X			X												
~~MW-13D-a~~	~~29-oct-2014~~	~~1415~~		~~X~~			~~X~~												

10/29/14

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	10/29/14	1530	1.		
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx

Analytical Lab: Accutest

Lab Recipient:

Shipped:

Airbill #: 8063 1883 8039

Location: Orlando FL

Date: Time:

1) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

AECOM chemist: Dori Cullom

864-234-8922 doria.cullom@aecom.com

FL VOCs by 8260B – unpreserved vials – 7 day holding time

Nitrate/Nitrite – 48 hr holding time

52745\adhum\project control\project forms\Blank COC

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/27/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-1
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	clear
Air Temperature	80's ° F
Total Well Depth (TWD) =	18.00 1/100 ft
Depth to Ground Water (DGW) =	13.53 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	4.47 1/100 ft
1 Casing Volume (OCV) = LWC x	.163 = 0.73 gal
3 Casing Volumes =	2.18 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.2 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	3-18 1/100 ft
Dedicated Pump or Bailer	YES ___ NO ✓ Type ___
Steel Guard Pipe Around Casing	YES ✓ NO ___
Locking Cap	YES ✓ NO ___
Protective Post/Abutment	YES ___ NO ✓
Well Integrity Satisfactory	YES ✓ NO ___
Yield	LOW ✓ MODERATE ___ HIGH ___
Comments/Observations	
Sample Time: 1635	QA/QC: NA
Sample Analytes: VOC	TWD: 18.42

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.20	0.40	0.60	0.80	1.00	1.20	
TIME (Military)	1600	1605	1610	1615	1620	1625	1630	
Water Level (ft. BTOC)	13.80	14.07	14.23	14.39	14.48	14.57	14.66	
pH (S.U.)	4.48	4.41	4.39	3.89	4.11	4.11	4.13	
Sp. Cond. (mS/cm)	0.034	0.034	0.034	0.034	0.034	0.034	0.034	
Water Temp. (°C)	24.79	24.75	24.71	24.94	24.90	24.97	24.83	
Turbidity (NTUs)	2.44	4.65	3.47	3.16	2.60	2.85	2.07	
Dissolved Oxygen (mg/L)	3.27	3.43	3.65	2.78	2.47	2.35	2.30	
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
ORP (mV)	112.8	125.7	128.3	151.2	130.2	120.7	113.2	

COMMENTS/OBSERVATIONS

begin purging at 1555 — PID @ Well Head: 0.0

Purging rate (ml/min): 150 — PID @ Breathing Zone: 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 27, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-2
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Clear Sunny
Air Temperature	° F
Total Well Depth (TWD) =	18.00 1/100 ft
Depth to Ground Water (DGW) =	13.66 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	4.34 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	~~0.7~~ 0.70 gal
3 Casing Volumes =	2.12 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.60 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	3 – 18 1/100 ft
Dedicated Pump or Bailer	YES ___ NO X Type ___
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE ___ HIGH ___
Comments/Observations	
Sample Time: 1708	QA/QC: none
Sample Analytes:	8260 VOCS

FIELD ANALYSES

		(Turn down)						
VOLUME PURGED (gallons)	initial	.40	.70	1.0	1.30	1.60		
TIME (Military)	1641	1646	1651	1656	1701	1706		
Water Level (ft. BTOC)	13.94	14.17	14.22	14.26	14.29	14.30		
pH (S.U.)	4.85	4.57	4.56	4.45	4.44	4.36		
Sp. Cond. (mS/cm)	0.021	0.020	0.020	0.020	0.020	0.020		
Water Temp. (°C)	25.88	25.27	25.22	24.97	24.90	24.86		
Turbidity (NTUs)	11.64	4.33	1.69	1.08	1.55	1.14		
Dissolved Oxygen (mg/L)	1.90	2.09	2.02	1.67	1.56	1.49		
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01		
ORP (mV)	217.6	180.7	187.4	210.9	221.7	219.3		

COMMENTS/OBSERVATIONS

begin purging at 1638

Purging rate (ml/min)

PID well Head 0.0 ppm
PID Breathing Zone 0.0 ppm

PID 0.0 ppm at well head and breathing zone

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 28, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-3
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Clear/Sunny
Air Temperature	84 ° F
Total Well Depth (TWD) =	18.00 1/100 ft
Depth to Ground Water (DGW) =	14.16 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	3.84 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	0.62 gal
3 Casing Volumes =	1.87 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	3.45 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	3 - 18 1/100 ft
Dedicated Pump or Bailer	YES ____ NO X Type ____
Steel Guard Pipe Around Casing	YES X NO ____
Locking Cap	YES X NO ____
Protective Post/Abutment	YES ____ NO X
Well Integrity Satisfactory	YES X NO ____
Yield	LOW X MODERATE ____ HIGH ____
Comments/Observations	
Sample Time: 1545	QA/QC: NA
Sample Analytes: VOC's	

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.35	.70	1.05	1.40	1.75	2.05	2.35
TIME (Military)	1430	1445	1450	1455	1500	1505	1510	1515
Water Level (ft. BTOC)	14.38	14.79	15.03	15.52	15.84	15.95	16.15	16.45
pH (S.U.)	6.67	4.82	4.57	4.44	4.41	4.49	4.44	4.36
Sp. Cond. (mS/cm)	0.026	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Water Temp. (°C)	25.08	24.87	24.82	24.82	24.80	24.99	24.59	24.62
Turbidity (NTUs)	2.90	2.45	2.44	4.00	5.37	5.55	5.73	8.64
Dissolved Oxygen (mg/L)	5.13	4.77	4.61	4.50	4.40	RPD ~~5.55~~ 4.62	4.34	4.09
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ORP (mV)	276.5	322.5	343.6	361.8	364.2	359.4	366.1	372.8

COMMENTS/OBSERVATIONS begin purging at 1436

PID well Head 0.0 ppm

PID Breathing Zone 0.0 ppm

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC	Date (mo/day/yr)	Oct 28, 2014
AECOM Job #	60314964	Field Personnel	Randy Morgan
Sample ID*	MW-3	Comments/Observations:	

FIELD ANALYSES

VOLUME PURGED (gallons)	2.60	2.90	3.20	3.45				
TIME (Military)	1520	1525	1530	1535				
Water Level (ft. BTOC)	16.83	17.14	17.26	17.43				
pH (S.U.)	4.34	4.37	4.36	4.35				
Sp. Cond. (mS/cm)	0.023	0.023	0.023	0.023				
Water Temp. (°C)	24.50	24.56	24.29	24.22				
Turbidity (NTUs)	10.86	12.05	10.92	11.04				
Dissolved Oxygen (mg/L)	4.03	4.58	4.61	4.40				
Salinity (ppt)	0.01	0.01	0.01	0.01				
ORP (mV)	366.8	373.1	373.6	376.4				

Almost Dry allow to recover to sample

FIELD ANALYSES

VOLUME PURGED (gallons)								
TIME (Military)								
Water Level (ft. BTOC)								
pH (S.U.)								
Sp. Cond. (mS/cm)								
Water Temp. (°C)								
Turbidity (NTUs)								
Dissolved Oxygen (mg/L)								
Salinity (ppt)								
ORP (mV)								

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 28, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-3D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	clear / sunny
Air Temperature	85 ° F
Total Well Depth (TWD) =	49.00 1/100 ft
Depth to Ground Water (DGW) =	16.07 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	32.93 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	5.36 gal
3 Casing Volumes =	16.10 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.75 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	44 - 49 1/100 ft
Dedicated Pump or Bailer	YES X NO ___ Type tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE ___ HIGH X
Comments/Observations	
Sample Time:	1625 QA/QC: NA
Sample Analytes:	VOC'S

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.35	.70	1.05	1.40	1.75		
TIME (Military)	1558	1603	1608	1613	1618	1623		
Water Level (ft. BTOC)	16.08	16.09	16.09	16.09	16.09	16.09		
pH (S.U.)	7.42	7.48	7.53	7.54	7.55	7.54		
Sp. Cond. (mS/cm)	0.228	0.231	0.231	0.231	0.231	0.231		
Water Temp. (°C)	22.83	22.22	22.09	22.06	21.93	21.93		
Turbidity (NTUs)	305.8	88.37	16.39	6.36	4.79	2.75		
Dissolved Oxygen (mg/L)	3.08	3.21	3.14	3.17	3.17	3.19		
Salinity (ppt)	0.11	0.11	0.11	0.11	0.11	0.11		
ORP (mV)	272.9	260.4	258.1	245.5	238.1	234.5		

COMMENTS/OBSERVATIONS begin purging at 1553 PID at well head 1.0

Purging rate (ml/min) PID Breathing Zone 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 28, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-3D1
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Clear Sunny
Air Temperature	86 °F
Total Well Depth (TWD) =	85.00 1/100 ft
Depth to Ground Water (DGW) =	15.89 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	69.11 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	11.26 gal
3 Casing Volumes =	33.79 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.60 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	75 - 85 1/100 ft
Dedicated Pump or Bailer	YES X NO ___ Type Tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE ___ HIGH X
Comments/Observations	
Sample Time: ~~1500~~ 1700	QA/QC: NA
Sample Analytes: VOCs	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.40	.80	1.20	1.60			
TIME (Military)	1637	1642	1647	1452	1457			
Water Level (ft. BTOC)	15.96	15.96	15.97	15.96	15.96			
pH (S.U.)	7.60	7.58	7.57	7.59	7.59			
Sp. Cond. (mS/cm)	0.225	0.224	0.224	0.224	0.224			
Water Temp. (°C)	22.93	22.30	22.17	22.09	22.03			
Turbidity (NTUs)	5.34	1.41	1.55	0.84	0.62			
Dissolved Oxygen (mg/L)	0.63	0.34	0.27	0.23	0.21			
Salinity (ppt)	0.11	0.11	0.11	0.11	0.11			
ORP (mV)	-50.0	-82.5	-91.1	-90.7	-92.1			

COMMENTS/OBSERVATIONS begin purging at 1633

PID Well Head 0.0 ppm
Breathing Zone 0.0 ppm

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-5
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Clear
Air Temperature	70's ° F
Total Well Depth (TWD) =	14.0 1/100 ft
Depth to Ground Water (DGW) =	11.43 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	2.57 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	0.42 gal
3 Casing Volumes =	1.26 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	4-14 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ✓ MODERATE ____ HIGH ____
Comments/Observations	
Sample Time: 1205	QA/QC: NA
Sample Analytes: VOC/MNA	Fe: 0.0

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	
TIME (Military)	1132	1137	1142	1147	1152	1157	1202	
Water Level (ft. BTOC)	11.87	12.05	12.25	12.46	12.54	12.61	12.68	
pH (S.U.)	4.51	4.49	4.42	4.31	4.35	4.39	4.37	
Sp. Cond. (mS/cm)	0.021	0.021	0.020	0.021	0.021	0.021	0.021	
Water Temp. (°C)	24.84	24.24	24.00	24.09	24.27	24.35	24.47	
Turbidity (NTUs)	7.02	7.46	5.41	5.80	6.62	8.44	6.71	
Dissolved Oxygen (mg/L)	5.00	5.63	4.61	4.26	4.21	4.18	4.12	
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
ORP (mV)	325.5	325.2	327.7	332.3	329.0	321.6	327.2	

COMMENTS/OBSERVATIONS begin purging at 1125 — PID Well Head: 0.0

Purging rate (ml/min) 150 — PID Breathing zone: 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-8
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Clear
Air Temperature	70's ° F
Total Well Depth (TWD) =	20.0 1/100 ft
Depth to Ground Water (DGW) =	13.02 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	6.98 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	1.14 gal
3 Casing Volumes =	3.42 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.2 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	5-20 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ✓ HIGH ____
Comments/Observations	
Sample Time: 1105	QA/QC: NA
Sample Analytes: VOC/MNA	Fe: 0.0

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	
TIME (Military)	1032	1037	1042	1047	1052	1057	1102	
Water Level (ft. BTOC)	13.22	13.40	13.46	13.51	13.55	13.59	13.60	
pH (S.U.)	4.31	4.27	4.30	4.21	4.22	4.24	4.27	
Sp. Cond. (mS/cm)	0.053	0.054	0.053	0.053	0.052	0.051	0.051	
Water Temp. (°C)	25.05	25.63	25.75	25.96	26.01	26.04	26.18	
Turbidity (NTUs)	36.98	11.45	6.55	2.71	3.70	3.37	0.94	
Dissolved Oxygen (mg/L)	3.81	4.24	4.02	4.57	3.68	3.67	3.59	
Salinity (ppt)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
ORP (mV)	332.9	345.3	345.9	352.5	348.5	346.9	343.7	

COMMENTS/OBSERVATIONS begin purging at 1025

Purging rate (ml/min) 150

PID Well Head: 0.1-0.8

PID Breathing Zone: 0.0-0.2

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/29/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-9
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Clear
Air Temperature	80's ° F
Total Well Depth (TWD) =	20.0 1/100 ft
Depth to Ground Water (DGW) =	9.78 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	10.22 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	1.67 gal
3 Casing Volumes =	5.00 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.2 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	5-20 1/100 ft
Dedicated Pump or Bailer	YES ___ NO ✓ Type ___
Steel Guard Pipe Around Casing	YES ✓ NO ___
Locking Cap	YES ✓ NO ___
Protective Post/Abutment	YES ___ NO ✓
Well Integrity Satisfactory	YES ✓ NO ___
Yield	LOW ✓ MODERATE ___ HIGH ___
Comments/Observations	
Sample Time: 1240	QA/QC: MS/MSD
Sample Analytes: VOC	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	
TIME (Military)	1205	1210	1215	1220	1225	1230	1235	
Water Level (ft. BTOC)	10.37	10.65	10.89	11.06	11.20	11.31	11.42	
pH (S.U.)	4.29	4.16	4.10	4.08	4.16	4.14	4.11	
Sp. Cond. (mS/cm)	0.024	0.024	0.024	0.024	0.024	0.024	0.024	
Water Temp. (°C)	21.92	21.66	21.67	21.58	21.61	21.63	21.64	
Turbidity (NTUs)	4.93	4.42	3.51	3.72	4.31	4.44	4.17	
Dissolved Oxygen (mg/L)	1.10	0.86	0.79	0.81	0.85	0.95	0.95	
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
ORP (mV)	118.9	130.9	139.8	142.0	139.9	144.9	149.8	

COMMENTS/OBSERVATIONS

begin purging at 1200 — PID well head 7.0-10.1

Purging rate (ml/min) 150 — PID Breathing zone 0.0-0.1

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/29/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-10
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	clear
Air Temperature	70's ° F
Total Well Depth (TWD) =	18.0 1/100 ft
Depth to Ground Water (DGW) =	8.50 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	9.5 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	1.54 gal
3 Casing Volumes =	4.65 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.4 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	3-18 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ____ HIGH ____
Comments/Observations	
Sample Time: 1125	QA/QC: NA
Sample Analytes: VOC	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	1.4
TIME (Military)	1045	1050	1055	1100	1105	1110	1115	1120
Water Level (ft. BTOC)	8.72	8.73	8.74	8.75	8.76	8.77	8.78	8.79
pH (S.U.)	4.87	4.53	4.46	4.41	4.35	4.30	4.32	4.35
Sp. Cond. (mS/cm)	0.036	0.033	0.032	0.030	0.028	0.028	0.027	0.028
Water Temp. (°C)	20.28	20.38	20.47	20.55	20.62	20.65	20.69	20.70
Turbidity (NTUs)	8.95	4.87	5.99	3.44	3.80	1.64	0.72	0.51
Dissolved Oxygen (mg/L)	2.10	1.91	2.03	1.58	1.14	0.86	0.70	0.68
Salinity (ppt)	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ORP (mV)	141.4	188.5	230.1	96.3	12.3	-25.2	-32.3	-37.4

COMMENTS/OBSERVATIONS

begin purging at 1035 — PID well head 1.5-2.0

Purging rate (ml/min) 150 — PID Breathing Zone 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/29/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-10D
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Clear
Air Temperature	70's ° F
Total Well Depth (TWD) =	48.0 1/100 ft
Depth to Ground Water (DGW) =	9.40 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	38.6 1/100 ft
1 Casing Volume (OCV) = LWC x	0.163 = 6.29 gal
3 Casing Volumes =	18.87 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.25 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	43-48 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ____ HIGH ✓
Comments/Observations	
Sample Time: 1025	QA/QC: NA
Sample Analytes: VOC's	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.25	0.50	0.75	1.0	1.25		
TIME (Military)	0957	1002	1007	1012	1017	1022		
Water Level (ft. BTOC)	9.45	9.45	9.45	9.45	9.45	9.45		
pH (S.U.)	6.60	7.38	7.53	7.58	7.59	7.60		
Sp. Cond. (mS/cm)	0.211	0.213	0.214	0.213	0.213	0.214		
Water Temp. (°C)	18.92	18.81	18.85	18.81	18.79	18.79		
Turbidity (NTUs)	5.15	2.68	0.77	0.23	0.77	0.01		
Dissolved Oxygen (mg/L)	4.77	4.36	4.28	4.22	4.19	4.18		
Salinity (ppt)	0.10	0.10	0.10	0.10	0.10	0.10		
ORP (mV)	178.3	166.5	158.3	149.7	144.8	140.1		

COMMENTS/OBSERVATIONS begin purging at 0950 — PID Well Head 0.0

Purging rate (ml/min) 200 — PID Breathing Zone 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 29, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-12D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	mostly Sunny
Air Temperature	80 °F
Total Well Depth (TWD) =	~~[illegible]~~ 50.00 1/100 ft
Depth to Ground Water (DGW) =	15.56 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	34.44 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	5.61 gal
3 Casing Volumes =	16.84 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	3.90 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	40 - 50 1/100 ft
Dedicated Pump or Bailer	YES X NO ___ Type tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW X MODERATE X HIGH ___
Comments/Observations	
Sample Time: 1448	QA/QC: NA
Sample Analytes: VOC'S	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50	1.80	2.10
TIME (Military)	1341	1346	1351	1356	1401	1406	1411	1416
Water Level (ft. BTOC)	16.48	17.17	17.52	17.67	17.73	17.77	17.73	17.69
pH (S.U.)	11.69	11.70	11.73	11.73	11.68	11.55	11.31	11.03
Sp. Cond. (mS/cm)	1.216	1.226	1.214	1.160	1.045	0.781	0.540	0.399
Water Temp. (°C)	20.93	20.39	20.32	20.51	20.63	20.46	20.36	20.28
Turbidity (NTUs)	6.42	3.14	2.39	2.76	2.34	2.43	3.06	4.39
Dissolved Oxygen (mg/L)	4.80	4.62	4.58	4.49	4.55	4.55	4.55	4.68
Salinity (ppt)	0.61	0.61	0.60	0.58	0.51	0.38	0.26	0.19
ORP (mV)	-31.8	-48.0	-52.9	-55.9	-55.5	-50.0	-39.9	-27.7

COMMENTS/OBSERVATIONS begin purging at 1338 ph and Conductivity goes down during purging

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC	Date (mo/day/yr)	Oct 29 2014
AECOM Job #	60314964	Field Personnel	Randy Morgan
Sample ID*	MW-12D	Comments/Observations:	Conductivity will go down during purging also Ph does too

FIELD ANALYSES

VOLUME PURGED (gallons)	2.40	2.70	3.0	3.30	3.60	3.90		
TIME (Military)	1421	1426	1431	1436	1441	1446		
Water Level (ft. BTOC)	17.67	17.64	17.60	17.60	17.58	17.58		
pH (S.U.)	(10.72) 10.72	10.47	10.26	10.15	10.01	9.97		
Sp. Cond. (mS/cm)	0.323	0.289	0.271	0.263	0.256	0.254		
Water Temp. (°C)	20.22	20.21	20.50	20.57	20.51	20.56		
Turbidity (NTUs)	4.18	3.18	2.96	2.77	2.87	2.55		
Dissolved Oxygen (mg/L)	4.70	4.77	4.79	4.78	4.81	4.82		
Salinity (ppt)	0.15	0.14	0.13	0.12	0.12	0.12		
ORP (mV)	-13.5	-4.5	+53 (+53)	+10.6	+17.2	+20.9		

FIELD ANALYSES

VOLUME PURGED (gallons)								
TIME (Military)								
Water Level (ft. BTOC)								
pH (S.U.)								
Sp. Cond. (mS/cm)								
Water Temp. (°C)								
Turbidity (NTUs)								
Dissolved Oxygen (mg/L)								
Salinity (ppt)								
ORP (mV)								

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/29/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-13D
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Clear
Air Temperature	80's ° F
Total Well Depth (TWD) =	50 1/100 ft
Depth to Ground Water (DGW) =	14.29 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	35.71 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	5.82 gal
3 Casing Volumes =	17.46 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	40-50 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ____ HIGH ✓
Comments/Observations	
Sample Time: 1415	QA/QC: Dup
Sample Analytes: VOC	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.25	0.5	0.75	1.00	1.25	1.50	1.75
TIME (Military)	1324	1329	1334	1339	1344	1349	1354	1359
Water Level (ft. BTOC)	14.30	14.30	14.30	14.30	14.3	14.30	14.30	14.30
pH (S.U.)	9.80	9.75	9.57	9.29	8.71	8.38	8.10	7.97
Sp. Cond. (mS/cm)	0.162	0.164	0.168	0.176	0.197	0.205	0.211	0.215
Water Temp. (°C)	21.96	21.65	21.61	21.61	21.68	21.74	21.75	22.01
Turbidity (NTUs)	3.06	1.29	1.93	2.65	2.33	1.99	2.45	3.42
Dissolved Oxygen (mg/L)	4.37	4.07	4.15	4.19	4.32	4.43	4.44	4.55
Salinity (ppt)	0.08	0.08	0.08	0.08	0.09	0.10	0.10	0.10
ORP (mV)	80.6	71.7	64.7	60.5	65.1	71.7	77.0	79.6

COMMENTS/OBSERVATIONS

begin purging at 1320

Purging rate (ml/min) 200

PID Well Head 0.2

PID Breathing zone 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC	Date (mo/day/yr)	10/29/14
AECOM Job #	60314964	Field Personnel	J Butler
Sample ID*	MW-13D	Comments/Observations:	

FIELD ANALYSES

VOLUME PURGED (gallons)	2.00	2.25	2.5					
TIME (Military)	1404	1409	1414					
Water Level (ft. BTOC)	14.30	14.30	14.30					
pH (S.U.)	7.91	7.89	7.86					
Sp. Cond. (mS/cm)	0.215	0.216	0.217					
Water Temp. (°C)	21.98	22.13	22.76					
Turbidity (NTUs)	3.49	3.05	2.40					
Dissolved Oxygen (mg/L)	4.43	4.42	4.45					
Salinity (ppt)	0.10	0.10	0.10					
ORP (mV)	80.4	80.3	81.6					

FIELD ANALYSES

VOLUME PURGED (gallons)								
TIME (Military)								
Water Level (ft. BTOC)								
pH (S.U.)								
Sp. Cond. (mS/cm)								
Water Temp. (°C)								
Turbidity (NTUs)								
Dissolved Oxygen (mg/L)								
Salinity (ppt)								
ORP (mV)								

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-14
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Clear
Air Temperature	80's ° F
Total Well Depth (TWD) =	20.0 1/100 ft
Depth to Ground Water (DGW) =	13.05 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	6.95 1/100 ft
1 Casing Volume (OCV) = LWC x	0.163 = 1.13 gal
3 Casing Volumes =	3.39 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.4 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	~~5/20~~ 5-20 1/100 ft
Dedicated Pump or Bailer	YES ✓ NO ___ Type tubing
Steel Guard Pipe Around Casing	YES ✓ NO ___
Locking Cap	YES ✓ NO ___
Protective Post/Abutment	YES ___ NO ✓
Well Integrity Satisfactory	YES ✓ NO ___
Yield	LOW ___ MODERATE ✓ HIGH ___
Comments/Observations	
Sample Time: 1330	QA/QC: NA Fe: 0.04
Sample Analytes:	VOC/MNA

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	1.4
TIME (Military)	1254	1259	1304	1309	1314	1319	1324	1329
Water Level (ft. BTOC)	13.35	13.60	13.81	13.98	14.09	14.20	14.30	14.41
pH (S.U.)	4.43	4.32	4.36	4.29	4.32	4.37	4.38	4.39
Sp. Cond. (mS/cm)	0.024	0.023	0.023	0.023	0.023	0.024	0.024	0.024
Water Temp. (°C)	24.88	24.88	24.53	24.86	24.88	25.55	25.46	25.57
Turbidity (NTUs)	15.32	8.70	5.47	9.72	4.24	3.64	3.23	1.59
Dissolved Oxygen (mg/L)	4.99	5.09	4.86	4.84	~~4.29~~ 5.75	5.67	5.58	5.61
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ORP (mV)	312.2	313.2	312.1	314.8	312.5	310.5	310.6	310.5

COMMENTS/OBSERVATIONS

begin purging at 1250 — PID well head: 0.2

Purging rate (ml/min) 150 — PID Breathing zone: 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-14D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	clear
Air Temperature	80's ° F
Total Well Depth (TWD) =	50.0 1/100 ft
Depth to Ground Water (DGW) =	14.99 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	35.01 1/100 ft
1 Casing Volume (OCV) = LWC x	0.163 = 5.70 gal
3 Casing Volumes =	17.10 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.75 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	40-50 1/100 ft
Dedicated Pump or Bailer	YES ✓ NO ___ Type tubing
Steel Guard Pipe Around Casing	YES ✓ NO ___
Locking Cap	YES ✓ NO ___
Protective Post/Abutment	YES ___ NO ✓
Well Integrity Satisfactory	YES ✓ NO ___
Yield	LOW ___ MODERATE ___ HIGH ✓
Comments/Observations	
Sample Time:	1435 QA/QC: dup
Sample Analytes:	VOC

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.25	0.5	0.75	1.0	1.25	1.5	1.75
TIME (Military)	1358	1403	1408	1413	1418	1423	1428	1433
Water Level (ft. BTOC)	15.02	15.02	15.02	15.02	15.02	15.02	15.02	15.02
pH (S.U.)	7.29	7.51	7.53	7.54	7.56	7.56	7.57	7.58
Sp. Cond. (mS/cm)	0.205	0.224	0.228	0.228	0.228	0.228	0.227	0.227
Water Temp. (°C)	24.12	23.49	23.30	23.20	23.33	23.35	23.31	23.16
Turbidity (NTUs)	88.36	106.6	117.6	120.5	94.84	71.86	75.09	68.21
Dissolved Oxygen (mg/L)	1.25	0.49	0.32	0.25	0.24	0.24	0.25	0.26
Salinity (ppt)	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ORP (mV)	223.1	178.0	146.0	121.3	103.0	96.0	90.9	86.1

COMMENTS/OBSERVATIONS begin purging at 1350

Purging rate (ml/min) 200

PID Well Head : 0.0-0.7

PID Breathing Zone : 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 29, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	~~MW-15~~ MW-15
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	partly Cloudy
Air Temperature	58 ° F
Total Well Depth (TWD) =	19.00 1/100 ft
Depth to Ground Water (DGW) =	4.51 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	14.49 1/100 ft
1 Casing Volume (OCV) = LWC x	.163 = 2.36 gal
3 Casing Volumes =	7.08 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	2.60 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	~~3-18~~ RM 4-19 1/100 ft
Dedicated Pump or Bailer	YES X NO ____ Type Tubing
Steel Guard Pipe Around Casing	YES X NO ____
Locking Cap	YES X NO ____
Protective Post/Abutment	YES ____ NO X
Well Integrity Satisfactory	YES X NO ____
Yield	LOW ____ MODERATE X HIGH ____
Comments/Observations	
Sample Time: 0843	QA/QC: NA
Sample Analytes: VOCs	

FIELD ANALYSES

		(turn down)						
VOLUME PURGED (gallons)	initial	.40	.75	1.20	1.55	1.90	2.25	2.60
TIME (Military)	0806	0811	0816	0821	0826	0831	0836	0841
Water Level (ft. BTOC)	4.68	4.85	4.88	4.92	4.97	4.98	5.00	4.98
pH (S.U.)	4.42	4.46	4.38	4.30	4.33	4.39	4.41	4.43
Sp. Cond. (mS/cm)	0.367	0.360	0.359	0.359	0.359	0.359	0.359	0.360
Water Temp. (°C)	19.07	19.64	19.70	19.76	19.87	19.91	19.93	19.94
Turbidity (NTUs) orange	100.8	56.13	57.81	60.53	33.35	7.82	5.31	2.57
Dissolved Oxygen (mg/L)	0.52	0.71	0.98	1.12	0.92	0.65	0.54	0.49
Salinity (ppt)	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ORP (mV)	166.4	171.9	190.1	222.8	199.8	167.2	155.5	151.8

COMMENTS/OBSERVATIONS begin purging at 0804

PID well Head 0.0 ppm
PID Breathing Zone 0.0 ppm

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 29, 2014
Field Personnel	Randy Moryan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-15D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	partly cloudy
Air Temperature	62 ° F
Total Well Depth (TWD) =	45.00 1/100 ft
Depth to Ground Water (DGW) =	3.79 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	41.21 1/100 ft
1 Casing Volume (OCV) = LWC x	.163 = 6.71 gal
3 Casing Volumes =	20.13 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	2.10 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	35 - 45 1/100 ft
Dedicated Pump or Bailer	YES X NO ___ Type Tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE ___ HIGH X
Comments/Observations	
Sample Time:	0927 QA/QC: N/A
Sample Analytes:	VOC's

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.35	.70	1.05	1.40	1.75	2.10	
TIME (Military)	0855	0900	0905	0910	0915	0920	0925	
Water Level (ft. BTOC)	3.80	3.79	3.80	3.80	3.80	3.80	3.80	
pH (S.U.)	6.67	7.01	7.09	7.10	7.10	7.11	7.11	
Sp. Cond. (mS/cm)	0.377	0.421	0.424	0.423	0.422	0.422	0.421	
Water Temp. (°C)	18.05	18.24	18.42	18.46	18.45	18.44	18.47	
Turbidity (NTUs)	34.04	20.13	12.86	8.55	8.62	6.63	5.19	
Dissolved Oxygen (mg/L)	2.22	2.45	2.51	2.52	2.54	2.56	2.56	
Salinity (ppt)	0.18	0.20	0.20	0.20	0.20	0.20	0.20	
ORP (mV)	-80.9	-47.1	+7.9	+16.9	+24.9	+30.6	+33.9	

COMMENTS/OBSERVATIONS begin purging at 0852

PID well head 0.0 ppm

PID Breathing zone 0.0 ppm

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 29, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-15D1
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	partly cloudy
Air Temperature	64 ° F
Total Well Depth (TWD) =	85.00 1/100 ft
Depth to Ground Water (DGW) =	3.93 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	81.07 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	13.21 gal
3 Casing Volumes =	39.64 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	2.80 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	75-85 1/100 ft
Dedicated Pump or Bailer	YES X NO ___ Type Tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE ___ HIGH X
Comments/Observations	
Sample Time:	1020 QA/QC: NA
Sample Analytes:	VOCs

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.40	.80	1.20	1.60	2.0	2.40	2.80
TIME (Military)	0942	0947	0952	0957	1002	1007	1012	1017
Water Level (ft. BTOC)	3.98	4.00	3.98	3.98	3.99	3.99	3.99	3.99
pH (S.U.)	7.61	7.65	7.67	7.67	7.67	7.67	7.67	7.68
Sp. Cond. (mS/cm)	0.210	0.207	0.208	0.209	0.209	0.210	0.210	0.211
Water Temp. (°C)	18.94	18.81	18.81	18.83	18.83	18.81	18.83	18.78
Turbidity (NTUs)	34.19	13.49	13.40	13.28	11.00	9.83	7.10	5.48
Dissolved Oxygen (mg/L)	0.60	0.21	0.19	0.19	0.21	0.22	0.24	0.24
Salinity (ppt)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
ORP (mV)	-141.5	-147.5	-157.5	-151.1	-155.5	-157.0	-157.6	-155.6

COMMENTS/OBSERVATIONS begin purging at 0940 PID well head 0.0 ppm
PID Breathing Zone 0.0 ppm
Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10-29-14
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-16
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Sunny
Air Temperature	70 ° F
Total Well Depth (TWD) =	19.00 1/100 ft
Depth to Ground Water (DGW) =	6.73 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	12.27 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	2.00 gal
3 Casing Volumes =	6.00 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	2.10 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	4 - 19 1/100 ft
Dedicated Pump or Bailer	YES X NO ___ Type tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE X HIGH ___
Comments/Observations	
Sample Time: 1137	QA/QC: Duplicate
Sample Analytes:	VOC's

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.30	.60	.90	1.20	1.50	1.80	2.10
TIME (Military)	1100	1105	1110	1115	1120	1125	1130	1135
Water Level (ft. BTOC)	7.05	7.29	7.57	7.77	7.94	8.13	8.20	8.33
pH (S.U.)	5.00	4.79	4.68	4.58	4.55	4.53	4.53	4.53
Sp. Cond. (mS/cm)	0.034	0.032	0.030	0.030	0.030	0.030	0.031	0.031
Water Temp. (°C)	20.24	20.30	20.34	20.45	20.39	20.42	20.49	20.46
Turbidity (NTUs)	72.74	44.88	20.10	10.57	9.08	9.19	8.42	
Dissolved Oxygen (mg/L)	1.29	0.46	0.62	1.12	0.97	0.83	0.65	0.58
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ORP (mV)	185.9	220.9	229.7	215.3	199.0	208.9	218.6	222.9

wl (8.20)

COMMENTS/OBSERVATIONS begin purging at 1057

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): Oct 29, 2014
Field Personnel: Randy Morgan
Site Name: UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #: 60314964
Sample ID: MW-16D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source
Weather Conditions: mostly Sunny
Air Temperature: 71 °F
Total Well Depth (TWD) = 45.00 1/100 ft
Depth to Ground Water (DGW) = 6.78 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 38.22 1/100 ft
1 Casing Volume (OCV) = LWC x .163 = 6.23 gal
3 Casing Volumes = ___ gal = Standard Evacuation Volume
Method of Sample Evacuation: Purging with a peristaltic pump
Method of Sample Collection: peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed: 1.75 gal

Casing Diameter: 2" PVC inches
Casing Material
Measuring Point Elevation ___ 1/100 ft
Height of Riser (above land surface) ___ 1/100 ft
Land Surface Elevation ___ 1/100 ft
Screened Interval: 35 - 45 1/100 ft
Dedicated Pump or Bailer: YES X NO ___ Type: Tubing
Steel Guard Pipe Around Casing: YES X NO ___
Locking Cap: YES X NO ___
Protective Post/Abutment: YES ___ NO X
Well Integrity Satisfactory: YES X NO ___
Yield: LOW ___ MODERATE ___ HIGH X
Comments/Observations
Sample Time: 1218 QA/QC: NA
Sample Analytes: VOCs

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.35	.70	1.05	1.40	1.75		
TIME (Military)	1151	1156	1201	1206	1211	1216		
Water Level (ft. BTOC)	6.78	6.78	6.78	6.78	6.78	6.78		
pH (S.U.)	6.75	7.01	7.31	7.34	7.36	7.37		
Sp. Cond. (mS/cm)	0.306	0.310	0.312	0.311	0.310	0.310		
Water Temp. (°C)	19.37	19.63	19.98	19.99	19.01	18.98		
Turbidity (NTUs)	3.41	4.46	2.25	2.54	2.70	2.48		
Dissolved Oxygen (mg/L)	3.61	3.77	3.86	3.88	3.88	3.84		
Salinity (ppt)	0.15	0.15	0.15	0.15	0.15	0.15		
ORP (mV)	133.5	132.8	133.3	134.1	137.3	138.7		

PID Well Head 0.0 ppm
PID Breathing Zone 0.0 ppm

COMMENTS/OBSERVATIONS: begin purging at 1149
Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/29/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-17
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Partly cloudy
Air Temperature	60's ° F
Total Well Depth (TWD) =	28 1/100 ft
Depth to Ground Water (DGW) =	6.93 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	21.07 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	3.43 gal
3 Casing Volumes =	10.30 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.2 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	13-28 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ✓ HIGH ____
Comments/Observations	
Sample Time: 0840	QA/QC: NA
Sample Analytes: VOC	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	
TIME (Military)	0806	0811	0816	0821	0826	0831	0836	
Water Level (ft. BTOC)	7.39	7.45	7.50	7.53	7.54	7.54	7.55	
pH (S.U.)	4.64	4.60	4.53	4.47	4.46	4.45	4.45	
Sp. Cond. (mS/cm)	0.155	0.155	0.158	0.160	0.160	0.161	0.161	
Water Temp. (°C)	18.42	18.38	18.32	18.31	18.26	18.22	18.21	
Turbidity (NTUs)	3.84	1.06	~~1.55~~ 2.64	3.41	2.30	1.21	0.80	
Dissolved Oxygen (mg/L)	1.57	1.28	~~2.69~~ 1.55	1.87	2.59	2.41	2.49	
Salinity (ppt)	0.07	0.07	0.07	0.08	0.08	0.08	0.08	
ORP (mV)	200.1	193.6	190.7	188.6	187.3	186.4	185.4	

COMMENTS/OBSERVATIONS

begin purging at 0800

Purging rate (ml/min) 150

PID Well Head: 0.3-0.4

PID Breathing Zone: 0.0-0.1

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/29/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-18
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	clear
Air Temperature	60's ° F
Total Well Depth (TWD) =	26 1/100 ft
Depth to Ground Water (DGW) =	12.48 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	13.52 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	2.20 gal
3 Casing Volumes =	6.60 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.4 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	11-26 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ____ HIGH ✓
Comments/Observations	
Sample Time: 09.35	QA/QC: NA
Sample Analytes: VOC	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0	1.2	1.4
TIME (Military)	0855	0900	0905	0910	0915	0920	0925	0930
Water Level (ft. BTOC)	12.61	12.62	12.62	12.62	12.62	12.62	12.62	12.62
pH (S.U.)	4.30	4.26	4.20	4.22	4.22	4.21	4.22	4.21
Sp. Cond. (mS/cm)	0.045	0.045	0.045	0.046	0.046	0.046	0.046	0.046
Water Temp. (°C)	19.74	19.92	20.02	20.07	20.14	20.16	20.16	20.18
Turbidity (NTUs)	1.58	0.75	0.13	0.00	0.00	0.00	0.00	0.00
Dissolved Oxygen (mg/L)	4.01	3.16	2.92	2.46	2.05	1.78	1.71	1.68
Salinity (ppt)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
ORP (mV)	219.3	217.6	214.0	208.9	205.4	202.5	201.0	199.6

COMMENTS/OBSERVATIONS

begin purging at 0850

Purging rate (ml/min) 150

PID Well Head : 0.0

PID Breathing zone : 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 28 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-19
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	~~clear~~ Rm cloudy
Air Temperature	57 °F
Total Well Depth (TWD) =	20.00 1/100 ft
Depth to Ground Water (DGW) =	14.47 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	5.53 1/100 ft
1 Casing Volume (OCV) = LWC x	0.0408 = 0.22 gal
3 Casing Volumes =	0.67 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.85 gal

Casing Diameter	1.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	5 - 15 1/100 ft
Dedicated Pump or Bailer	YES ___ NO X Type ___
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___ (dolphin lock)
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE X HIGH ___
Comments/Observations	
Sample Time: 0843	QA/QC: NA
Sample Analytes: VOC's/MNA parameters - RSK175, TOC, NO2, NO3, SO4, CHL	

FIELD ANALYSES

		(Turned down)						
VOLUME PURGED (gallons)	Initial	.35	.65	.95	1.25	1.55	1.85	
TIME (Military)	0811	0816	0821	0826	0831	0836	0841	
Water Level (ft. BTOC)	16.69	16.74	16.02	15.92	15.82	15.82	15.86	
pH (S.U.)	4.45	4.40	4.33	4.38	4.37	4.37	4.37	
Sp. Cond. (mS/cm)	0.112	0.122	0.125	0.129	0.129	0.131	0.132	
Water Temp. (°C)	21.45	21.81	22.04	22.12	22.18	22.21	22.25	
Turbidity (NTUs)	35.27	155.8	62.80	13.75	4.10	2.15	1.65	
Dissolved Oxygen (mg/L)	5.02	5.39	4.69	5.83	5.82	5.72	5.69	
Salinity (ppt)	0.05	0.06	0.06	0.06	0.06	0.06	0.06	
ORP (mV)	296.4	335.6	357.5	363.0	367.5	375.1	381.3	

COMMENTS/OBSERVATIONS

begin purging at 0806 PID well head 123.1 Fe = 0.01

Purging rate (ml/min) PID Breathing Zone 6.4

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	12-28-2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-20
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Cloudy
Air Temperature	56 °F
Total Well Depth (TWD) =	15.0 1/100 ft
Depth to Ground Water (DGW) =	14.38 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	0.62 1/100 ft
1 Casing Volume (OCV) = LWC x	0.0405 = 0.025 gal
3 Casing Volumes =	0.075 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	.30 gal

Casing Diameter	2.0" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	5 - 15 1/100 ft
Dedicated Pump or Bailer	YES ____ NO X Type ____
Steel Guard Pipe Around Casing	YES X NO ____
Locking Cap	YES X NO ____
Protective Post/Abutment	YES ____ NO X
Well Integrity Satisfactory	YES X NO ____
Yield	LOW X MODERATE ____ HIGH ____

Comments/Observations

Sample Time: 1100 QA/QC: NA

Sample Analytes: VOC's, MNA parameters - RSK175, TOC, NO2, NO3, SO4, CHL

	DRY	Dry	DRY	FIELD ANALYSES				
VOLUME PURGED (gallons)	initial	.10	.20	.30				
TIME (Military)	0918	0950	1010	1033				
Water Level (ft. BTOC)	15.02	15.02	15.02	15.02				
pH (S.U.)	4.32	4.58	4.43	4.40				
Sp. Cond. (mS/cm)	0.036	0.034	0.033	0.033				
Water Temp. (°C)	22.57	22.45	22.43	22.41				
Turbidity (NTUs)	796.2	68.01	10.43	11.32				
Dissolved Oxygen (mg/L)	5.75	4.59	4.53	4.50				
Salinity (ppt)	0.02	0.01	0.01	0.01				
ORP (mV)	376.9	372.6	382.4	386.8				

COMMENTS/OBSERVATIONS begin purging at 0915

PID Well Head 23.2

PID Breathing Zone 6.7

Fe - 0.00

Purging rate (ml/min)

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-21
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	clear
Air Temperature	60's °F
Total Well Depth (TWD) =	34.0 1/100 ft
Depth to Ground Water (DGW) =	14.59 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	19.41 1/100 ft
1 Casing Volume (OCV) = LWC x	0.163 = 3.16 gal
3 Casing Volumes =	9.49 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.0 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	19-34 1/100 ft
Dedicated Pump or Bailer	YES ____ NO ✓ Type ____
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ✓ MODERATE ____ HIGH ____
Comments/Observations	
Sample Time: 1005	QA/QC: NA Fe: 0.9
Sample Analytes: VOC/MNA	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0		
TIME (Military)	0935	0940	0945	0950	0955	1000		
Water Level (ft. BTOC)	15.47	15.90	16.07	16.07	16.07	16.07		
pH (S.U.)	4.85	4.56	4.47	4.44	4.46	4.44		
Sp. Cond. (mS/cm)	0.027	0.025	0.024	0.024	0.024	0.024		
Water Temp. (°C)	21.60	21.32	21.29	21.37	21.48	21.58		
Turbidity (NTUs)	162.6	59.34	16.12	9.13	6.69	5.40		
Dissolved Oxygen (mg/L)	0.97	0.41	0.50	0.92	1.01	1.04		
Salinity (ppt)	0.01	0.01	0.01	0.01	0.01	0.01		
ORP (mV)	270.2	302.9	321.3	327.8	329.5	330.1		

COMMENTS/OBSERVATIONS begin purging at 0925 PID well head: 17.6 - 28.0

Purging rate (ml/min) 150 PID Breathing zone: 0.0 - 0.3

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-21D
____ Upgradient ____ Downgradient ____ Sidegradient ____ Source	
Weather Conditions	Clear/Fog
Air Temperature	60's °F
Total Well Depth (TWD) =	53.0 1/100 ft
Depth to Ground Water (DGW) =	14.84 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	38.16 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	6.22 gal
3 Casing Volumes =	18.66 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.0 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	43-53 1/100 ft
Dedicated Pump or Bailer	YES ✓ NO ____ Type tubing
Steel Guard Pipe Around Casing	YES ✓ NO ____
Locking Cap	YES ✓ NO ____
Protective Post/Abutment	YES ____ NO ✓
Well Integrity Satisfactory	YES ✓ NO ____
Yield	LOW ____ MODERATE ____ HIGH ✓
Comments/Observations	
Sample Time: 0850	QA/QC: NA Fe: 0.26
Sample Analytes: VOC/MNA	

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.2	0.4	0.6	0.8	1.0		
TIME (Military)	0821	0826	0831	0836	0841	0846		
Water Level (ft. BTOC)	14.88	14.88	14.88	14.88	14.88	14.88		
pH (S.U.)	7.69	7.61	7.58	7.56	7.56	7.53		
Sp. Cond. (mS/cm)	0.396	0.237	0.206	0.202	0.200	0.200		
Water Temp. (°C)	20.92	20.95	21.07	21.09	21.09	21.08		
Turbidity (NTUs)	10.52	9.17	3.37	3.13	1.61	1.95		
Dissolved Oxygen (mg/L)	0.54	0.34	0.23	0.25	0.24	0.21		
Salinity (ppt)	0.16	0.11	0.10	0.10	0.09	0.09		
ORP (mV)	748.8	696.1	685.7	674.0	~~656.2~~ 656.2	699.1		

COMMENTS/OBSERVATIONS

begin purging at 0815

Purging rate (ml/min) 150

PID Well Head: 0.0-0.1

PID Breathing zone: 0.6-0.7

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Oct 28, 2014
Field Personnel	Randy Megan
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-22D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Clear/Sunny
Air Temperature	80 ° F
Total Well Depth (TWD) =	48.00 1/100 ft
Depth to Ground Water (DGW) =	14.22 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	33.78 1/100 ft
1 Casing Volume (OCV) = LWC x .163 =	5.50 gal
3 Casing Volumes =	16.51 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	3.90 gal

Casing Diameter	2.0 inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	38 - 34 1/100 ft
Dedicated Pump or Bailer	YES X NO ~~X~~ Type Tubing
Steel Guard Pipe Around Casing	YES X NO ___
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___
Yield	LOW ___ MODERATE ___ HIGH X
Comments/Observations	Sample Time: 1350 QA/QC: NA
	Sample Analytes: VOC's / MNA parameters

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.30	.60	.90	1.20	1.50	1.80	2.10
TIME (Military)	1244	1249	1254	1259	1304	1309	1314	1319
Water Level (ft. BTOC)	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23
pH (S.U.)	11.65	11.79	11.78	11.23	11.64	11.56	11.47	11.38
Sp. Cond. (mS/cm)	1.281	1.340	1.250	1.090	0.911	0.785	0.686	0.596
Water Temp. (°C)	22.26	20.75	20.48	20.54	20.48	20.41	20.36	20.44
Turbidity (NTUs)	4.14	4.27	2.23	2.12	1.87	1.91	2.45	1.44
Dissolved Oxygen (mg/L)	1.39	0.55	0.56	0.73	0.97	1.17	1.41	1.61
Salinity (ppt)	0.64	0.70	0.62	0.54	0.45	0.38	0.33	0.29
ORP (mV)	134.6	76.0	42.3	29.7	20.1	16.1	13.7	14.3

COMMENTS/OBSERVATIONS begin purging at 1236 PID well Head 1.4 Breathing Zone 0.0 Fe = 0.29

Purging rate (ml/min) 250 ml/min

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC	Date (mo/day/yr)	Oct 28, 2014
AECOM Job #	60314964	Field Personnel	Randy Boggs
Sample ID*	MW-22D	Comments/Observations:	

FIELD ANALYSES

VOLUME PURGED (gallons)	2.40	2.70	3.0	3.30	3.60	3.90		
TIME (Military)	1324	1329	1334	1339	1344	1349		
Water Level (ft. BTOC)	14.23	14.23	14.23	14.23	14.23	14.23		
pH (S.U.)	11.34	11.31	11.21	11.17	11.11	11.08		
Sp. Cond. (mS/cm)	0.569	0.540	0.483	0.465	0.432	0.429		
Water Temp. (°C)	20.41	20.45	20.34	20.47	20.35	20.25		
Turbidity (NTUs)	1.23	1.54	2.05	0.93	1.30	1.66		
Dissolved Oxygen (mg/L)	1.65	1.66	1.75	1.80	1.92	1.95		
Salinity (ppt)	0.28	0.26	0.23	0.23	0.21	0.20		
ORP (mV)	13.7	11.7	12.3	10.2	11.1	11.1		

FIELD ANALYSES

VOLUME PURGED (gallons)								
TIME (Military)								
Water Level (ft. BTOC)								
pH (S.U.)								
Sp. Cond. (mS/cm)								
Water Temp. (°C)								
Turbidity (NTUs)								
Dissolved Oxygen (mg/L)								
Salinity (ppt)								
ORP (mV)								

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	10/28/14
Field Personnel	J Butler
Site Name	UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job #	60314964
Sample ID	MW-23D
___ Upgradient ___ Downgradient ___ Sidegradient ___ Source	
Weather Conditions	Clear
Air Temperature	80's ° F
Total Well Depth (TWD) =	50.0 1/100 ft
Depth to Ground Water (DGW) =	16.18 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	33.2 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	5.41 gal
3 Casing Volumes =	16.23 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purging with a peristaltic pump
Method of Sample Collection	peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed	1.25 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	1/100 ft
Height of Riser (above land surface)	Flush 1/100 ft
Land Surface Elevation	1/100 ft
Screened Interval	40-50 1/100 ft
Dedicated Pump or Bailer	YES ✓ NO ___ Type tubing
Steel Guard Pipe Around Casing	YES ✓ NO ___
Locking Cap	YES ✓ NO ___
Protective Post/Abutment	YES ___ NO ✓
Well Integrity Satisfactory	YES ✓ NO ___
Yield	LOW ___ MODERATE ___ HIGH ✓
Comments/Observations	
Sample Time:	1540 QA/QC: NA
Sample Analytes:	VOC

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.25	0.5	0.75	1.00	1.25		
TIME (Military)	1514	1519	1524	1529	1534	1539		
Water Level (ft. BTOC)	16.18	16.18	16.18	16.18	16.18	16.18		
pH (S.U.)	7.89	7.61	7.43	7.42	7.41	7.40		
Sp. Cond. (mS/cm)	0.271	0.267	0.269	0.274	0.279	0.282		
Water Temp. (°C)	22.94	22.67	22.35	22.29	22.28	22.24		
Turbidity (NTUs)	12.20	7.55	7.00	6.76	4.48	3.97		
Dissolved Oxygen (mg/L)	1.32	1.00	0.98	1.04	1.08	1.15		
Salinity (ppt)	0.13	0.13	0.13	0.13	0.13	0.13		
ORP (mV)	114.6	102.6	108.2	109.3	109.9	111.0		

COMMENTS/OBSERVATIONS begin purging at 1505

Purging rate (ml/min) 200

PID Well head: 0.0

PID Breathing Zone: 0.0

AECOM

FIELD DATA LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr) 10/29/14
Field Personnel R. Morgan / J Butler
Site Name UTC Delavan Spray Technologies Site, Bamberg, SC
AECOM Job # 60314964
Sample ID Polalle-1
_____ Upgradient ___ Downgradient _____ Sidegradient _____ Source
Weather Conditions Clear
Air Temperature 80's °F
Total Well Depth (TWD) = _____ 1/100 ft
Depth to Ground Water (DGW) = _____ 1/100 ft
Length of Water Column (LWC) = TWD - DGW = _____ 1/100 ft
1 Casing Volume (OCV) = LWC x _____ = _____ gal
3 Casing Volumes = _____ gal = Standard Evacuation Volume
Method of Sample Evacuation Purging with a peristaltic pump
Method of Sample Collection peristaltic pump; reverse flow for VOCs
Total Volume of Water Removed _____ gal

Casing Diameter _____ inches
Casing Material _____
Measuring Point Elevation _____ 1/100 ft
Height of Riser (above land surface) _____ 1/100 ft
Land Surface Elevation _____ 1/100 ft
Screened Interval _____ 1/100 ft
Dedicated Pump or Bailer YES _____ NO _____ Type _____
Steel Guard Pipe Around Casing YES _____ NO _____
Locking Cap YES _____ NO _____
Protective Post/Abutment YES _____ NO _____
Well Integrity Satisfactory YES _____ NO _____
Yield LOW _____ MODERATE _____ HIGH _____
Comments/Observations
Sample Time: QA/QC:
Sample Analytes:

FIELD ANALYSES

VOLUME PURGED (gallons)	~1.0							
TIME (Military)	1520							
Water Level (ft. BTOC)								
pH (S.U.)	8.43							
Sp. Cond. (mS/cm)	0.143							
Water Temp. (°C)	23.99							
Turbidity (NTUs)	2.67							
Dissolved Oxygen (mg/L)	3.89							
Salinity (ppt)	0.07							
ORP (mV)	599.4							

COMMENTS/OBSERVATIONS begin purging at
Purging rate (ml/min)

IDW MANAGEMENT FORM

PROJECT: UTC Delavan Spray Technologies Site - Fall 2014 Semi-Annual GW Sampling

AECOM

SITE NAME: Delavan Spray Technologies Site

LOCATION: Bamberg, South Carolina

PROJECT #: 60314964

CONTAINER NUMBER	MEDIA DESCRIPTION	MEDIA ORIGIN	DATE FILLED	DATE SAMPLED	DATE DISPOSED	COMMENTS
	Well Purge Water	Semi-annual sampling Event	10-27→29	10-29		MW- 1, 2, 19, 20, 21, 21D, 8, 5, 14, 22D, 3, 3D, 3D1, 14D, 23D, 15, 15D, 15D1, 16, 16D, 18, 17, 10, 10, 9, 13D, 12D

APPENDIX B

ANALYTICAL DATA

Laboratory Reports – Accutest Southeast
Data Assessment Reports

Southeast ACCUTEST LABORATORIES

11/12/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA19497

Sampling Dates: 10/27/14 - 10/28/14

Report to:

AECOM Environment
10 Patewood Dr Bldg VI, Suite 500
Greenville, SC 29615
doria.cullom@aecom.com

ATTN: Doria Cullom

Total number of pages in report: **73**

Norm Farmer
Technical Director

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.

Client Service contact: Heather Wandrey 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 (2937), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

Test results relate only to samples analyzed.

Table of Contents

-1-

Accutest Laboratories

Sample Summary

United Technologies Corporation

Job No: FA19497

AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Project No: 60314964

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA19497-1	10/27/14	16:35	RMJB	10/29/14	AQ	Ground Water	MW-1
FA19497-2	10/27/14	17:08	RMJB	10/29/14	AQ	Ground Water	MW-2
FA19497-3	10/28/14	08:43	RMJB	10/29/14	AQ	Ground Water	MW-19
FA19497-4	10/28/14	08:50	RMJB	10/29/14	AQ	Ground Water	MW-21D
FA19497-5	10/28/14	10:05	RMJB	10/29/14	AQ	Ground Water	MW-21
FA19497-6	10/28/14	11:00	RMJB	10/29/14	AQ	Ground Water	MW-20
FA19497-7	10/28/14	11:05	RMJB	10/29/14	AQ	Ground Water	MW-8
FA19497-8	10/28/14	12:05	RMJB	10/29/14	AQ	Ground Water	MW-5
FA19497-9	10/28/14	13:30	RMJB	10/29/14	AQ	Ground Water	MW-14
FA19497-10	10/28/14	13:50	RMJB	10/29/14	AQ	Ground Water	MW-22D
FA19497-11	10/27/14	16:35	RMJB	10/29/14	AQ	Trip Blank Water	MW-1-C

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA19497

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date:** 11/12/2014 10:15:08

10 Sample(s), 1 Trip Blank(s) were collected on/between 10/27/2014 and 10/28/2014 and were received at Accutest SE on 10/29/2014 properly preserved, at 3.2 Deg. C and intact. These Samples received an Accutest job number of FA19497. 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: AQ **Batch ID:** VM3326

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19534-13MS, FA19534-13MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Carbon disulfide are outside control limits. Recovery was above upper control limit, but samples were ND for Carbon disulfide.

RPD(s) for MSD for 1,1,2,2-Tetrachloroethane, Benzene are outside control limits for sample FA19534-13MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA19534-13MSD has surrogates outside control limits. Probable cause is due to matrix interference.

FA19497-4 for Carbon disulfide: Associated BS recovery outside control limits.

FA19497-4: Sample was not preserved to a pH < 2.

FA19497-6 for Carbon disulfide: Associated BS recovery outside control limits.

FA19497-6: Sample was not preserved to a pH < 2.

FA19497-7 for Carbon disulfide: Associated BS recovery outside control limits.

FA19497-7: Sample was not preserved to a pH < 2.

FA19497-10: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VN3546

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19472-17MS, FA19472-17MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Chlorobenzene are outside control limits. Probable cause is due to matrix interference. % RPD was within control limits in MS/MSD.

FA19497-1: Sample was not preserved to a pH < 2.

FA19497-2: Sample was not preserved to a pH < 2.

FA19497-5: Sample was not preserved to a pH < 2.

FA19497-8: Sample was not preserved to a pH < 2.

FA19497-9: Sample was not preserved to a pH < 2.

FA19497-10: Sample was not preserved to a pH < 2.

Volatiles by GC By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GXY2595

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19497-3DUP, FA19497-3MS were used as the QC samples indicated.

RPD(s) for Duplicate for Methane are outside control limits for sample FA19497-3DUP. Probable cause is due to sample non-homogeneity.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP24899

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) FA19497-7MS, FA19497-7MSD, FA19497-8MS, FA19497-8MSD were used as the QC samples for Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate.

FA19497-6 for Chloride: Dilution required due to matrix interference.

FA19497-6 for Nitrogen, Nitrite: Dilution required due to matrix interference.

FA19497-6 for Sulfate: Dilution required due to matrix interference.

Wet Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP24903

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) FA19497-3DUP, FA19497-3MS were used as the QC samples for Total Organic Carbon.

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: November 12, 2014

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA19497
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 10/27/14 thru 10/28/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA19497-1	**MW-1**					
cis-1,2-Dichloroethylene [a]		131	20	6.5	ug/l	SW846 8260B
Tetrachloroethylene [a]		785	20	5.1	ug/l	SW846 8260B
Trichloroethylene [a]		18.6 J	20	6.0	ug/l	SW846 8260B
Vinyl chloride [a]		10.9 J	20	6.5	ug/l	SW846 8260B
FA19497-2	**MW-2**					
Tetrachloroethylene [a]		1.2	1.0	0.26	ug/l	SW846 8260B
FA19497-3	**MW-19**					
1,1-Dichloroethylene		12.0 J	20	5.1	ug/l	SW846 8260B
1,1,1-Trichloroethane		16.0 J	20	6.7	ug/l	SW846 8260B
Tetrachloroethylene		3470	1000	260	ug/l	SW846 8260B
Chloride		29.0	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		3.6	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		4.6	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.56 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA19497-4	**MW-21D**					
Tetrachloroethylene [a]		2.0	1.0	0.26	ug/l	SW846 8260B
Methane		0.77	0.50	0.16	ug/l	RSKSOP-147/175
Chloride		3.3	2.0	0.80	mg/l	EPA 300/SW846 9056A
Sulfate		2.8	2.0	0.60	mg/l	EPA 300/SW846 9056A
FA19497-5	**MW-21**					
cis-1,2-Dichloroethylene [a]		733	200	65	ug/l	SW846 8260B
Tetrachloroethylene [a]		14500	200	51	ug/l	SW846 8260B
Trichloroethylene [a]		354	200	60	ug/l	SW846 8260B
Methane		82.6	0.50	0.16	ug/l	RSKSOP-147/175
Chloride		3.7	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.097 J	0.10	0.050	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrite		0.050 J	0.10	0.050	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.78 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA19497-6	**MW-20**					
Tetrachloroethylene [a]		428	5.0	1.3	ug/l	SW846 8260B
Trichloroethylene [a]		2.7 J	5.0	1.5	ug/l	SW846 8260B
Nitrogen, Nitrate		1.1	0.50	0.25	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.2	1.0	0.23	mg/l	SM5310 B-11/SW9060A

Summary of Hits

Job Number: FA19497
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 10/27/14 thru 10/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA19497-7	**MW-8**					
Tetrachloroethylene [a]		71.4	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		3.2	1.0	0.30	ug/l	SW846 8260B
Chloride		6.5	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		2.4	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		2.2	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.23 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA19497-8	**MW-5**					
Tetrachloroethylene [a]		1.1	1.0	0.26	ug/l	SW846 8260B
Chloride		0.93 J	2.0	0.80	mg/l	EPA 300/SW846 9056A
Sulfate		8.1	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.45 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA19497-9	**MW-14**					
Chloride		2.6	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.45	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		2.1	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.25 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA19497-10	**MW-22D**					
1,1-Dichloroethylene [a]		3.7	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		0.41 J	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		149	5.0	1.3	ug/l	SW846 8260B
Trichloroethylene [a]		0.86 J	1.0	0.30	ug/l	SW846 8260B
Chloride		8.5	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.82	0.10	0.050	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrite		0.26	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		5.5	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.0	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA19497-11	**MW-1-C**					

No hits reported in this sample.

(a) Sample was not preserved to a pH < 2.

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	FA19497-1	**Date Sampled:**	10/27/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080501.D	20	10/30/14	RB	n/a	n/a	VN3546
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	210	ug/l	
71-43-2	Benzene	ND	20	4.9	ug/l	
75-27-4	Bromodichloromethane	ND	20	5.2	ug/l	
75-25-2	Bromoform	ND	20	7.7	ug/l	
108-90-7	Chlorobenzene	ND	20	4.8	ug/l	
75-00-3	Chloroethane	ND	40	10	ug/l	
67-66-3	Chloroform	ND	20	6.2	ug/l	
75-15-0	Carbon disulfide	ND	40	4.0	ug/l	
56-23-5	Carbon tetrachloride	ND	20	7.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	5.1	ug/l	
75-35-4	1,1-Dichloroethylene	ND	20	5.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	4.8	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	7.1	ug/l	
124-48-1	Dibromochloromethane	ND	20	7.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	131	20	6.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	4.2	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	20	6.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	4.2	ug/l	
100-41-4	Ethylbenzene	ND	20	5.6	ug/l	
591-78-6	2-Hexanone	ND	200	40	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	100	20	ug/l	
74-83-9	Methyl bromide	ND	40	11	ug/l	
74-87-3	Methyl chloride	ND	40	11	ug/l	
75-09-2	Methylene chloride	ND	100	40	ug/l	
78-93-3	Methyl ethyl ketone	ND	100	30	ug/l	
100-42-5	Styrene	ND	20	4.7	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	6.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	5.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	6.3	ug/l	
127-18-4	Tetrachloroethylene	785	20	5.1	ug/l	
108-88-3	Toluene	ND	20	4.0	ug/l	
79-01-6	Trichloroethylene	18.6	20	6.0	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	FA19497-1	**Date Sampled:**	10/27/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	10.9	20	6.5	ug/l	J
1330-20-7	Xylene (total)	ND	60	13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	95%		79-125%
2037-26-5	Toluene-D8	89%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	FA19497-2	**Date Sampled:**	10/27/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080502.D	1	10/30/14	RB	n/a	n/a	VN3546
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	1.2	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	FA19497-2	**Date Sampled:**	10/27/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	95%		79-125%
2037-26-5	Toluene-D8	91%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-19		
Lab Sample ID:	FA19497-3	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0080503.D	20	10/30/14	RB	n/a	n/a	VN3546
Run #2	M78614.D	1000	11/01/14	RB	n/a	n/a	VM3326

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	210	ug/l	
71-43-2	Benzene	ND	20	4.9	ug/l	
75-27-4	Bromodichloromethane	ND	20	5.2	ug/l	
75-25-2	Bromoform	ND	20	7.7	ug/l	
108-90-7	Chlorobenzene	ND	20	4.8	ug/l	
75-00-3	Chloroethane	ND	40	10	ug/l	
67-66-3	Chloroform	ND	20	6.2	ug/l	
75-15-0	Carbon disulfide	ND	40	4.0	ug/l	
56-23-5	Carbon tetrachloride	ND	20	7.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	5.1	ug/l	
75-35-4	1,1-Dichloroethylene	12.0	20	5.1	ug/l	J
107-06-2	1,2-Dichloroethane	ND	20	4.8	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	7.1	ug/l	
124-48-1	Dibromochloromethane	ND	20	7.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	20	6.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	4.2	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	20	6.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	4.2	ug/l	
100-41-4	Ethylbenzene	ND	20	5.6	ug/l	
591-78-6	2-Hexanone	ND	200	40	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	100	20	ug/l	
74-83-9	Methyl bromide	ND	40	11	ug/l	
74-87-3	Methyl chloride	ND	40	11	ug/l	
75-09-2	Methylene chloride	ND	100	40	ug/l	
78-93-3	Methyl ethyl ketone	ND	100	30	ug/l	
100-42-5	Styrene	ND	20	4.7	ug/l	
71-55-6	1,1,1-Trichloroethane	16.0	20	6.7	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	5.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	6.3	ug/l	
127-18-4	Tetrachloroethylene	3470 [a]	1000	260	ug/l	
108-88-3	Toluene	ND	20	4.0	ug/l	
79-01-6	Trichloroethylene	ND	20	6.0	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	FA19497-3	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	20	6.5	ug/l	
1330-20-7	Xylene (total)	ND	60	13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	109%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	102%	79-125%
2037-26-5	Toluene-D8	91%	96%	85-112%
460-00-4	4-Bromofluorobenzene	95%	94%	83-118%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	FA19497-3	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060115.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	FA19497-3	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	29.0	2.0	0.80	mg/l	1	10/29/14 14:40	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	3.6	0.10	0.050	mg/l	1	10/29/14 14:40	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	10/29/14 14:40	VK	EPA 300/SW846 9056A
Sulfate	4.6	2.0	0.60	mg/l	1	10/29/14 14:40	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.56 J	1.0	0.23	mg/l	1	10/31/14 00:05	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-21D		
Lab Sample ID:	FA19497-4	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78611.D	1	11/01/14	RB	n/a	n/a	VM3326
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	2.0	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-21D		
Lab Sample ID:	FA19497-4	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	92%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-21D		
Lab Sample ID:	FA19497-4	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060116.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.77	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-21D		
Lab Sample ID:	FA19497-4	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	3.3	2.0	0.80	mg/l	1	10/29/14 14:57	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.050 U	0.10	0.050	mg/l	1	10/29/14 14:57	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	10/29/14 14:57	VK	EPA 300/SW846 9056A
Sulfate	2.8	2.0	0.60	mg/l	1	10/29/14 14:57	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.23 U	1.0	0.23	mg/l	1	10/31/14 00:49	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-21		
Lab Sample ID:	FA19497-5	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080505.D	200	10/30/14	RB	n/a	n/a	VN3546
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5000	2100	ug/l	
71-43-2	Benzene	ND	200	49	ug/l	
75-27-4	Bromodichloromethane	ND	200	52	ug/l	
75-25-2	Bromoform	ND	200	77	ug/l	
108-90-7	Chlorobenzene	ND	200	48	ug/l	
75-00-3	Chloroethane	ND	400	100	ug/l	
67-66-3	Chloroform	ND	200	62	ug/l	
75-15-0	Carbon disulfide	ND	400	40	ug/l	
56-23-5	Carbon tetrachloride	ND	200	79	ug/l	
75-34-3	1,1-Dichloroethane	ND	200	51	ug/l	
75-35-4	1,1-Dichloroethylene	ND	200	51	ug/l	
107-06-2	1,2-Dichloroethane	ND	200	48	ug/l	
78-87-5	1,2-Dichloropropane	ND	200	71	ug/l	
124-48-1	Dibromochloromethane	ND	200	72	ug/l	
156-59-2	cis-1,2-Dichloroethylene	733	200	65	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	200	42	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	200	69	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	200	42	ug/l	
100-41-4	Ethylbenzene	ND	200	56	ug/l	
591-78-6	2-Hexanone	ND	2000	400	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1000	200	ug/l	
74-83-9	Methyl bromide	ND	400	110	ug/l	
74-87-3	Methyl chloride	ND	400	110	ug/l	
75-09-2	Methylene chloride	ND	1000	400	ug/l	
78-93-3	Methyl ethyl ketone	ND	1000	300	ug/l	
100-42-5	Styrene	ND	200	47	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	200	67	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	200	55	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	200	63	ug/l	
127-18-4	Tetrachloroethylene	14500	200	51	ug/l	
108-88-3	Toluene	ND	200	40	ug/l	
79-01-6	Trichloroethylene	354	200	60	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-21		
Lab Sample ID:	FA19497-5	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	200	65	ug/l	
1330-20-7	Xylene (total)	ND	600	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	90%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-21		
Lab Sample ID:	FA19497-5	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060117.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	82.6	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-21		
Lab Sample ID:	FA19497-5	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	3.7	2.0	0.80	mg/l	1	10/29/14 15:14	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.097 J	0.10	0.050	mg/l	1	10/29/14 15:14	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 J	0.10	0.050	mg/l	1	10/29/14 15:14	VK	EPA 300/SW846 9056A
Sulfate	0.60 U	2.0	0.60	mg/l	1	10/29/14 15:14	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.78 J	1.0	0.23	mg/l	1	10/31/14 01:35	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-20		
Lab Sample ID:	FA19497-6	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78615.D	5	11/01/14	RB	n/a	n/a	VM3326
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	130	53	ug/l	
71-43-2	Benzene	ND	5.0	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.3	ug/l	
75-25-2	Bromoform	ND	5.0	1.9	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.2	ug/l	
75-00-3	Chloroethane	ND	10	2.5	ug/l	
67-66-3	Chloroform	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide [b]	ND	10	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.8	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.8	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.6	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.7	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	ND	5.0	1.4	ug/l	
591-78-6	2-Hexanone	ND	50	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/l	
74-83-9	Methyl bromide	ND	10	2.7	ug/l	
74-87-3	Methyl chloride	ND	10	2.7	ug/l	
75-09-2	Methylene chloride	ND	25	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	25	7.4	ug/l	
100-42-5	Styrene	ND	5.0	1.2	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/l	
127-18-4	Tetrachloroethylene	428	5.0	1.3	ug/l	
108-88-3	Toluene	ND	5.0	1.0	ug/l	
79-01-6	Trichloroethylene	2.7	5.0	1.5	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20		
Lab Sample ID:	FA19497-6	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	5.0	1.6	ug/l	
1330-20-7	Xylene (total)	ND	15	3.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	84%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20		
Lab Sample ID:	FA19497-6	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060118.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-20		
Lab Sample ID:	FA19497-6	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride [a]	4.0 U	10	4.0	mg/l	5	10/29/14 17:12	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	1.1	0.50	0.25	mg/l	5	10/29/14 17:12	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite [a]	0.25 U	0.50	0.25	mg/l	5	10/29/14 17:12	VK	EPA 300/SW846 9056A
Sulfate [a]	3.0 U	10	3.0	mg/l	5	10/29/14 17:12	VK	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0	0.23	mg/l	1	10/31/14 01:51	FN	SM5310 B-11/SW9060A

(a) Dilution required due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA19497-7	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78612.D	1	11/01/14	RB	n/a	n/a	VM3326
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	71.4	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	3.2	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA19497-7	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	95%		79-125%
2037-26-5	Toluene-D8	92%		85-112%
460-00-4	4-Bromofluorobenzene	86%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA19497-7	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060119.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA19497-7	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	6.5	2.0	0.80	mg/l	1	10/29/14 15:31	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	2.4	0.10	0.050	mg/l	1	10/29/14 15:31	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	10/29/14 15:31	VK	EPA 300/SW846 9056A
Sulfate	2.2	2.0	0.60	mg/l	1	10/29/14 15:31	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.23 J	1.0	0.23	mg/l	1	10/31/14 02:05	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA19497-8	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080508.D	1	10/30/14	RB	n/a	n/a	VN3546
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	1.1	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA19497-8	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	90%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA19497-8	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060120.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA19497-8	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	0.93 J	2.0	0.80	mg/l	1	10/29/14 15:48	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.050 U	0.10	0.050	mg/l	1	10/29/14 15:48	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	10/29/14 15:48	VK	EPA 300/SW846 9056A
Sulfate	8.1	2.0	0.60	mg/l	1	10/29/14 15:48	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.45 J	1.0	0.23	mg/l	1	10/31/14 02:22	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA19497-9	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080509.D	1	10/30/14	RB	n/a	n/a	VN3546
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA19497-9	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	90%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA19497-9	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060121.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA19497-9	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	2.6	2.0	0.80	mg/l	1	10/29/14 16:05	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.45	0.10	0.050	mg/l	1	10/29/14 16:05	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	10/29/14 16:05	VK	EPA 300/SW846 9056A
Sulfate	2.1	2.0	0.60	mg/l	1	10/29/14 16:05	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.25 J	1.0	0.23	mg/l	1	10/31/14 02:37	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-22D		
Lab Sample ID:	FA19497-10	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080510.D	1	10/30/14	RB	n/a	n/a	VN3546
Run #2 [a]	M78616.D	5	11/01/14	RB	n/a	n/a	VM3326

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	3.7	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.41	1.0	0.33	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	149 [b]	5.0	1.3	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	0.86	1.0	0.30	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-22D		
Lab Sample ID:	FA19497-10	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	97%	79-125%
2037-26-5	Toluene-D8	89%	94%	85-112%
460-00-4	4-Bromofluorobenzene	96%	88%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-22D		
Lab Sample ID:	FA19497-10	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY060124.D	1	11/06/14	SH	n/a	n/a	GXY2595
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-22D		
Lab Sample ID:	FA19497-10	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/29/14
		Percent Solids:	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	8.5	2.0	0.80	mg/l	1	10/29/14 16:55	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.82	0.10	0.050	mg/l	1	10/29/14 16:55	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.26	0.10	0.050	mg/l	1	10/29/14 16:55	VK	EPA 300/SW846 9056A
Sulfate	5.5	2.0	0.60	mg/l	1	10/29/14 16:55	VK	EPA 300/SW846 9056A
Total Organic Carbon	1.0	1.0	0.23	mg/l	1	10/31/14 02:51	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-1-C		
Lab Sample ID:	FA19497-11	**Date Sampled:**	10/27/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0080500.D	1	10/30/14	RB	n/a	n/a	VN3546
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1-C		
Lab Sample ID:	FA19497-11	**Date Sampled:**	10/27/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/29/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	95%		79-125%
2037-26-5	Toluene-D8	89%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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

FA19497 AECOM PO# 56785ACM

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60314964
Chain of Custody Number (1): 10272014-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site, Bamberg SC

Client Name: UTC

Collected by: R. Morgan, J Butler

Project Manager: Walter Gerald 864-234-8825

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310D)	Nitrate, Nitrite, Sulfate, Chloride (9056)	Methane, Ethane, Ethene (RSK175)	SVOCs (8270D)	TPH Metals (6010C/7470A)						Quality Assurance Samples: COMMENTS	Cooler ID
MW-1	27-oct-2014	1635		X		Groundwater	X												
MW-2	27-oct-2014	1708		X			X												
MW-19	28-oct-2014	0843		X			X	X	X	X									
MW-21D	28-oct-2014	0850		X			X	X	X	X									
MW-21	28-oct-2014	1005		X			X	X	X	X									
MW-20	28-oct-2014	1100		X			X	X	X	X									
MW-8	28-oct-2014	1165		X			X	X	X	X									
MW-5	28-oct-2014	1205		X			X	X	X	X									
MW-14	28-oct-2014	1330		X			X	X	X	X									
MW-220	28-oct-2014	1350		X			X	X	X	X									
MW-1-c	27-oct-2014	1635		X			X												

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Randy Morgan	10-28-14	1500	1. FX		10:00
2. FX			2. J. Cooper (AVSE)	10-29-14	
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:		Shipped:	XXX
Method of Shipment:	FedEx	Airbill #:	8063 1183 8040
Analytical Lab:	Accutest	Location:	Orlando FL
Lab Recipient:		Date:	Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

2L VOCs by 8260B – unpreserved vials – 7 day holding time
Nitrate/Nitrite – 48 hr holding time

AECOM chemist: Dori Cullom
864-234-8922 doria.cullom@aecom.com

3.2

52745\admin\project control\project forms\Blank COC

5.1 5

FA19497: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 19497 CLIENT: AECOM PROJECT: WTC DEVAUAN

DATE/TIME RECEIVED: 10-29-14 10:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8063 1883 8040

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

TRIP BLANK INFORMATION

- [X] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [X] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [X] 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: 3.2

SAMPLE INFORMATION

- [ ] 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
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: VOC VIALS ARE N/D

TECHNICIAN SIGNATURE/DATE [illegible] 10-29-14 REVIEWER SIGNATURE/DATE [illegible] 10-29-14

RS 04/14

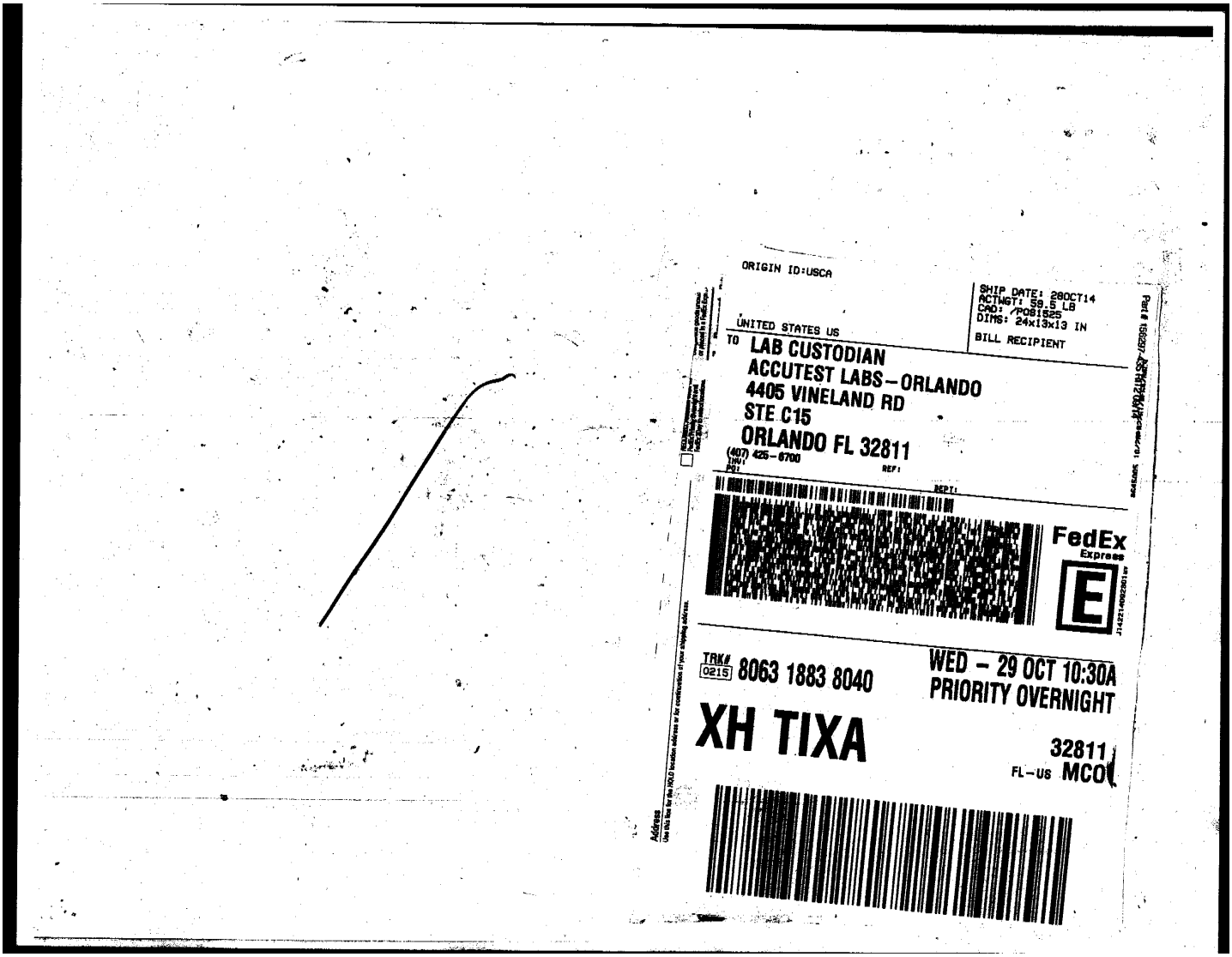
receipt confirmation 041514.xls

5.1

5

FA19497: Chain of Custody

Page 2 of 3



FA19497: Chain of Custody
Page 3 of 3

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: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3546-MB	N0080498.D	1	10/30/14	RB	n/a	n/a	VN3546

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-1, FA19497-2, FA19497-3, FA19497-5, FA19497-8, FA19497-9, FA19497-10, FA19497-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

Method Blank Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3546-MB	N0080498.D	1	10/30/14	RB	n/a	n/a	VN3546

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-1, FA19497-2, FA19497-3, FA19497-5, FA19497-8, FA19497-9, FA19497-10, FA19497-11

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	79-125%
2037-26-5	Toluene-D8	90%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Method Blank Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3326-MB	M78607.D	1	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-3, FA19497-4, FA19497-6, FA19497-7, FA19497-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

Method Blank Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3326-MB	M78607.D	1	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-3, FA19497-4, FA19497-6, FA19497-7, FA19497-10

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	89%	83-118%

Blank Spike Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3546-BS	N0080496.D	1	10/30/14	RB	n/a	n/a	VN3546

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-1, FA19497-2, FA19497-3, FA19497-5, FA19497-8, FA19497-9, FA19497-10, FA19497-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	137	110	50-147
71-43-2	Benzene	25	26.8	107	81-122
75-27-4	Bromodichloromethane	25	23.8	95	79-123
75-25-2	Bromoform	25	20.3	81	66-123
108-90-7	Chlorobenzene	25	28.2	113	82-124
75-00-3	Chloroethane	25	27.7	111	62-144
67-66-3	Chloroform	25	24.9	100	80-124
75-15-0	Carbon disulfide	25	33.9	136	66-148
56-23-5	Carbon tetrachloride	25	25.4	102	76-136
75-34-3	1,1-Dichloroethane	25	26.6	106	81-122
75-35-4	1,1-Dichloroethylene	25	30.0	120	78-137
107-06-2	1,2-Dichloroethane	25	23.9	96	75-125
78-87-5	1,2-Dichloropropane	25	26.1	104	76-124
124-48-1	Dibromochloromethane	25	23.2	93	78-122
156-59-2	cis-1,2-Dichloroethylene	25	25.2	101	78-120
10061-01-5	cis-1,3-Dichloropropene	25	23.5	94	75-118
156-60-5	trans-1,2-Dichloroethylene	25	27.1	108	76-127
10061-02-6	trans-1,3-Dichloropropene	25	23.7	95	80-120
100-41-4	Ethylbenzene	25	25.9	104	81-121
591-78-6	2-Hexanone	125	120	96	61-129
108-10-1	4-Methyl-2-pentanone	125	113	90	66-122
74-83-9	Methyl bromide	25	26.6	106	59-143
74-87-3	Methyl chloride	25	29.5	118	50-159
75-09-2	Methylene chloride	25	25.6	102	69-135
78-93-3	Methyl ethyl ketone	125	110	88	56-143
100-42-5	Styrene	25	24.9	100	78-119
71-55-6	1,1,1-Trichloroethane	25	26.2	105	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.1	96	72-120
79-00-5	1,1,2-Trichloroethane	25	25.3	101	76-119
127-18-4	Tetrachloroethylene	25	25.5	102	76-135
108-88-3	Toluene	25	26.1	104	80-120
79-01-6	Trichloroethylene	25	28.5	114	81-126
75-01-4	Vinyl chloride	25	31.0	124	69-159
1330-20-7	Xylene (total)	75	80.7	108	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3546-BS	N0080496.D	1	10/30/14	RB	n/a	n/a	VN3546

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-1, FA19497-2, FA19497-3, FA19497-5, FA19497-8, FA19497-9, FA19497-10, FA19497-11

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	88%	79-125%
2037-26-5	Toluene-D8	92%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3326-BS	M78605.D	1	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-3, FA19497-4, FA19497-6, FA19497-7, FA19497-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	144	115	50-147
71-43-2	Benzene	25	24.4	98	81-122
75-27-4	Bromodichloromethane	25	25.7	103	79-123
75-25-2	Bromoform	25	27.9	112	66-123
108-90-7	Chlorobenzene	25	28.8	115	82-124
75-00-3	Chloroethane	25	27.4	110	62-144
67-66-3	Chloroform	25	24.8	99	80-124
75-15-0	Carbon disulfide	25	40.7	163*	66-148
56-23-5	Carbon tetrachloride	25	28.1	112	76-136
75-34-3	1,1-Dichloroethane	25	25.1	100	81-122
75-35-4	1,1-Dichloroethylene	25	32.1	128	78-137
107-06-2	1,2-Dichloroethane	25	26.2	105	75-125
78-87-5	1,2-Dichloropropane	25	24.8	99	76-124
124-48-1	Dibromochloromethane	25	25.0	100	78-122
156-59-2	cis-1,2-Dichloroethylene	25	24.9	100	78-120
10061-01-5	cis-1,3-Dichloropropene	25	24.8	99	75-118
156-60-5	trans-1,2-Dichloroethylene	25	26.5	106	76-127
10061-02-6	trans-1,3-Dichloropropene	25	26.0	104	80-120
100-41-4	Ethylbenzene	25	24.0	96	81-121
591-78-6	2-Hexanone	125	135	108	61-129
108-10-1	4-Methyl-2-pentanone	125	131	105	66-122
74-83-9	Methyl bromide	25	27.4	110	59-143
74-87-3	Methyl chloride	25	27.4	110	50-159
75-09-2	Methylene chloride	25	29.6	118	69-135
78-93-3	Methyl ethyl ketone	125	138	110	56-143
100-42-5	Styrene	25	24.2	97	78-119
71-55-6	1,1,1-Trichloroethane	25	27.3	109	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	23.0	92	72-120
79-00-5	1,1,2-Trichloroethane	25	26.1	104	76-119
127-18-4	Tetrachloroethylene	25	29.5	118	76-135
108-88-3	Toluene	25	26.0	104	80-120
79-01-6	Trichloroethylene	25	25.5	102	81-126
75-01-4	Vinyl chloride	25	27.3	109	69-159
1330-20-7	Xylene (total)	75	80.2	107	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3326-BS	M78605.D	1	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-3, FA19497-4, FA19497-6, FA19497-7, FA19497-10

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	91%	85-112%
460-00-4	4-Bromofluorobenzene	87%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19472-17MS	N0080516.D	1000	10/30/14	RB	n/a	n/a	VN3546
FA19472-17MSD	N0080517.D	1000	10/30/14	RB	n/a	n/a	VN3546
FA19472-17 [a]	N0080512.D	10	10/30/14	RB	n/a	n/a	VN3546
FA19472-17 [a]	N0080514.D	1000	10/30/14	RB	n/a	n/a	VN3546

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-1, FA19497-2, FA19497-3, FA19497-5, FA19497-8, FA19497-9, FA19497-10, FA19497-11

CAS No.	Compound	FA19472-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	122	J	125000	107000	86	125000	114000	91	6	50-147/21
71-43-2	Benzene	10 U		25000	30200	121	25000	27100	108	11	81-122/14
75-27-4	Bromodichloromethane	10 U		25000	26300	105	25000	24900	100	5	79-123/19
75-25-2	Bromoform	10 U		25000	22600	90	25000	23200	93	3	66-123/21
108-90-7	Chlorobenzene	10 U		25000	31200	125*	25000	28600	114	9	82-124/14
75-00-3	Chloroethane	20 U		25000	26600	106	25000	22600	90	16	62-144/20
67-66-3	Chloroform	10 U		25000	27700	111	25000	25300	101	9	80-124/15
75-15-0	Carbon disulfide	20 U		25000	35300	141	25000	29200	117	19	66-148/23
56-23-5	Carbon tetrachloride	10 U		25000	28400	114	25000	23400	94	19	76-136/23
75-34-3	1,1-Dichloroethane	10 U		25000	30500	122	25000	27100	108	12	81-122/15
75-35-4	1,1-Dichloroethylene	26.5		25000	30300	121	25000	26000	104	15	78-137/18
107-06-2	1,2-Dichloroethane	5.3	J	25000	27000	108	25000	26500	106	2	75-125/14
78-87-5	1,2-Dichloropropane	10 U		25000	28800	115	25000	26700	107	8	76-124/14
124-48-1	Dibromochloromethane	10 U		25000	24800	99	25000	25000	100	1	78-122/19
156-59-2	cis-1,2-Dichloroethylene	9200 [b]		25000	36700	110	25000	33600	98	9	78-120/15
10061-01-5	cis-1,3-Dichloropropene	10 U		25000	26100	104	25000	24300	97	7	75-118/23
156-60-5	trans-1,2-Dichloroethylene	6.6	J	25000	29700	119	25000	25800	103	14	76-127/17
10061-02-6	trans-1,3-Dichloropropene	10 U		25000	25900	104	25000	24800	99	4	80-120/22
100-41-4	Ethylbenzene	10 U		25000	28300	113	25000	25200	101	12	81-121/14
591-78-6	2-Hexanone	231		125000	123000	98	125000	126000	101	2	61-129/18
108-10-1	4-Methyl-2-pentanone	50 U		125000	125000	100	125000	130000	104	4	66-122/16
74-83-9	Methyl bromide	20 U		25000	26400	106	25000	23300	93	12	59-143/19
74-87-3	Methyl chloride	20 U		25000	28500	114	25000	25500	102	11	50-159/19
75-09-2	Methylene chloride	50 U		25000	27600	110	25000	26300	105	5	69-135/16
78-93-3	Methyl ethyl ketone	120		125000	119000	95	125000	114000	91	4	56-143/18
100-42-5	Styrene	10 U		25000	27600	110	25000	24900	100	10	78-119/23
71-55-6	1,1,1-Trichloroethane	10 U		25000	28300	113	25000	24400	98	15	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	10 U		25000	29500	118	25000	29000	116	2	72-120/14
79-00-5	1,1,2-Trichloroethane	6.8	J	25000	27500	110	25000	27200	109	1	76-119/14
127-18-4	Tetrachloroethylene	10 U		25000	24600	98	25000	21300	85	14	76-135/16
108-88-3	Toluene	10 U		25000	27900	112	25000	25300	101	10	80-120/14
79-01-6	Trichloroethylene	13.3		25000	30300	121	25000	27000	108	12	81-126/15
75-01-4	Vinyl chloride	18100 [b]		25000	44100	104	25000	37300	77	17	69-159/18
1330-20-7	Xylene (total)	30 U		75000	87400	117	75000	78400	105	11	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19472-17MS	N0080516.D	1000	10/30/14	RB	n/a	n/a	VN3546
FA19472-17MSD	N0080517.D	1000	10/30/14	RB	n/a	n/a	VN3546
FA19472-17 [a]	N0080512.D	10	10/30/14	RB	n/a	n/a	VN3546
FA19472-17 [a]	N0080514.D	1000	10/30/14	RB	n/a	n/a	VN3546

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-1, FA19497-2, FA19497-3, FA19497-5, FA19497-8, FA19497-9, FA19497-10, FA19497-11

CAS No.	Surrogate Recoveries	MS	MSD	FA19472-17	FA19472-17	Limits
1868-53-7	Dibromofluoromethane	101%	101%	104%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	89%	90%	98%	97%	79-125%
2037-26-5	Toluene-D8	89%	91%	90%	89%	85-112%
460-00-4	4-Bromofluorobenzene	93%	92%	101%	96%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19534-13MS	M78626.D	10	11/02/14	RB	n/a	n/a	VM3326
FA19534-13MSD	M78627.D	10	11/02/14	RB	n/a	n/a	VM3326
FA19534-13 [a]	M78624.D	10	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-3, FA19497-4, FA19497-6, FA19497-7, FA19497-10

CAS No.	Compound	FA19534-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1250	721	58	1250	698	56	3	50-147/21
71-43-2	Benzene	ND		250	244	98	250	211	84	15*	81-122/14
75-27-4	Bromodichloromethane	ND		250	240	96	250	215	86	11	79-123/19
75-25-2	Bromoform	ND		250	254	102	250	220	88	14	66-123/21
108-90-7	Chlorobenzene	ND		250	281	112	250	245	98	14	82-124/14
75-00-3	Chloroethane	ND		250	288	115	250	293	117	2	62-144/20
67-66-3	Chloroform	ND		250	243	97	250	213	85	13	80-124/15
75-15-0	Carbon disulfide	ND		250	368	147	250	308	123	18	66-148/23
56-23-5	Carbon tetrachloride	ND		250	282	113	250	249	100	12	76-136/23
75-34-3	1,1-Dichloroethane	ND		250	245	98	250	213	85	14	81-122/15
75-35-4	1,1-Dichloroethylene	26.5		250	353	131	250	311	114	13	78-137/18
107-06-2	1,2-Dichloroethane	ND		250	246	98	250	214	86	14	75-125/14
78-87-5	1,2-Dichloropropane	ND		250	239	96	250	213	85	12	76-124/14
124-48-1	Dibromochloromethane	ND		250	244	98	250	221	88	10	78-122/19
156-59-2	cis-1,2-Dichloroethylene	664		250	914	100	250	865	80	6	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		250	230	92	250	204	82	12	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		250	260	104	250	226	90	14	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		250	239	96	250	214	86	11	80-120/22
100-41-4	Ethylbenzene	ND		250	232	93	250	204	82	13	81-121/14
591-78-6	2-Hexanone	ND		1250	1010	81	1250	875	70	14	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		1250	1170	94	1250	1000	80	16	66-122/16
74-83-9	Methyl bromide	ND		250	315	126	250	307	123	3	59-143/19
74-87-3	Methyl chloride	ND		250	285	114	250	277	111	3	50-159/19
75-09-2	Methylene chloride	ND		250	290	116	250	252	101	14	69-135/16
78-93-3	Methyl ethyl ketone	ND		1250	1000	80	1250	883	71	12	56-143/18
100-42-5	Styrene	ND		250	243	97	250	203	81	18	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		250	261	104	250	238	95	9	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	225	90	250	194	78	15*	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		250	258	103	250	226	90	13	76-119/14
127-18-4	Tetrachloroethylene	136		250	413	111	250	392	102	5	76-135/16
108-88-3	Toluene	2.2	J	250	257	102	250	228	90	12	80-120/14
79-01-6	Trichloroethylene	32.5		250	283	100	250	253	88	11	81-126/15
75-01-4	Vinyl chloride	ND		250	262	105	250	278	111	6	69-159/18
1330-20-7	Xylene (total)	ND		750	767	102	750	673	90	13	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19534-13MS	M78626.D	10	11/02/14	RB	n/a	n/a	VM3326
FA19534-13MSD	M78627.D	10	11/02/14	RB	n/a	n/a	VM3326
FA19534-13 [a]	M78624.D	10	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19497-3, FA19497-4, FA19497-6, FA19497-7, FA19497-10

CAS No.	Surrogate Recoveries	MS	MSD	FA19534-13	Limits
1868-53-7	Dibromofluoromethane	103%	101%	110%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	101%	79-125%
2037-26-5	Toluene-D8	89%	89%	95%	85-112%
460-00-4	4-Bromofluorobenzene	83%	80%*	93%	83-118%

(a) Sample was not preserved to a pH < 2.

* = 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: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY2595-MB	XY060113.D	1	11/06/14	SH	n/a	n/a	GXY2595

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

Blank Spike Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY2595-BS	XY060114.D	1	11/06/14	SH	n/a	n/a	GXY2595

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	76.8	71	61-144
74-84-0	Ethane	219	174	79	64-143
74-85-1	Ethene	290	231	80	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19497-3MS	XY060140.D	1	11/06/14	SH	n/a	n/a	GXY2595
FA19497-3	XY060115.D	1	11/06/14	SH	n/a	n/a	GXY2595

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10

CAS No.	Compound	FA19497-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	ND		108	77.6	72	61-144
74-84-0	Ethane	ND		219	234	107	64-143
74-85-1	Ethene	ND		290	315	109	64-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA19497
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19497-3DUP	XY060139.D	1	11/06/14	SH	n/a	n/a	GXY2595
FA19497-3	XY060115.D	1	11/06/14	SH	n/a	n/a	GXY2595

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10

CAS No.	Compound	FA19497-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	ND		0.65		200*	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = Outside of Control Limits.

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: FA19497
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP24899/GN63894	2.0	0.0	mg/l	50	50.8	101.6	90-110%
Nitrogen, Nitrate	GP24899/GN63894	0.10	0.0	mg/l	2.5	2.34	93.6	90-110%
Nitrogen, Nitrite	GP24899/GN63894	0.10	0.0	mg/l	2.5	2.40	96.0	90-110%
Sulfate	GP24899/GN63894	2.0	0.0	mg/l	50	53.6	107.2	90-110%
Total Organic Carbon	GP24903/GN63908	1.0	0.0	mg/l	15	14.4	96.0	90-110%

Associated Samples:
Batch GP24899: FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10
Batch GP24903: FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA19497
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Total Organic Carbon	GP24903/GN63908	FA19497-3	mg/l	0.56	0.55	1.8	0-20%

Associated Samples:
Batch GP24903: FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA19497
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP24899/GN63894	FA19497-7	mg/l	6.5	50	57.5	102.0	90-110%
Chloride	GP24899/GN63894	FA19497-8	mg/l	0.93	50	50.2	98.5	90-110%
Nitrogen, Nitrate	GP24899/GN63894	FA19497-7	mg/l	2.4	2.5	4.8	96.0	90-110%
Nitrogen, Nitrate	GP24899/GN63894	FA19497-8	mg/l	0.050 U	2.5	2.3	92.0	90-110%
Nitrogen, Nitrite	GP24899/GN63894	FA19497-7	mg/l	0.050 U	2.5	2.4	96.0	90-110%
Nitrogen, Nitrite	GP24899/GN63894	FA19497-8	mg/l	0.050 U	2.5	2.3	92.0	90-110%
Sulfate	GP24899/GN63894	FA19497-7	mg/l	2.2	50	53.8	103.2	90-110%
Sulfate	GP24899/GN63894	FA19497-8	mg/l	8.1	50	53.7	91.2	90-110%
Total Organic Carbon	GP24903/GN63908	FA19497-3	mg/l	0.56	15	15.3	98.3	90-110%

Associated Samples:
Batch GP24899: FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10
Batch GP24903: FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA19497
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP24899/GN63894	FA19497-7	mg/l	6.5	50	57.4	0.2	20%
Chloride	GP24899/GN63894	FA19497-8	mg/l	0.93	50	50.2	0.0	20%
Nitrogen, Nitrate	GP24899/GN63894	FA19497-7	mg/l	2.4	2.5	4.8	0.0	20%
Nitrogen, Nitrate	GP24899/GN63894	FA19497-8	mg/l	0.050 U	2.5	2.3	0.0	20%
Nitrogen, Nitrite	GP24899/GN63894	FA19497-7	mg/l	0.050 U	2.5	2.4	0.0	20%
Nitrogen, Nitrite	GP24899/GN63894	FA19497-8	mg/l	0.050 U	2.5	2.3	0.0	20%
Sulfate	GP24899/GN63894	FA19497-7	mg/l	2.2	50	54.4	1.1	20%
Sulfate	GP24899/GN63894	FA19497-8	mg/l	8.1	50	53.4	0.6	20%

Associated Samples:
Batch GP24899: FA19497-3, FA19497-4, FA19497-5, FA19497-6, FA19497-7, FA19497-8, FA19497-9, FA19497-10
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast ACCUTEST LABORATORIES

11/11/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA19534

Sampling Dates: 10/28/14 - 10/29/14

Report to:

AECOM Environment
10 Patewood Dr Bldg VI, Suite 500
Greenville, SC 29615
doria.cullom@aecom.com

ATTN: Doria Cullom

Total number of pages in report: **113**

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.

Norm Farmer
Technical Director

Client Service contact: Heather Wandrey 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 (2937), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

Test results relate only to samples analyzed.

Table of Contents

-1-

Accutest Laboratories

Sample Summary

United Technologies Corporation

Job No: FA19534

AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Project No: 60314964

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA19534-1	10/28/14	14:35	RMJB	10/30/14	AQ	Ground Water	MW-14D
FA19534-2	10/28/14	14:35	RMJB	10/30/14	AQ	Ground Water	MW-14D-A
FA19534-3	10/28/14	14:40	RMJB	10/30/14	AQ	Ground Water	MW-23D
FA19534-4	10/28/14	15:45	RMJB	10/30/14	AQ	Ground Water	MW-3
FA19534-5	10/28/14	16:25	RMJB	10/30/14	AQ	Ground Water	MW-3D
FA19534-6	10/28/14	17:00	RMJB	10/30/14	AQ	Ground Water	MW-3D1
FA19534-7	10/29/14	08:40	RMJB	10/30/14	AQ	Ground Water	MW-17
FA19534-8	10/29/14	08:43	RMJB	10/30/14	AQ	Ground Water	MW-15
FA19534-9	10/29/14	09:27	RMJB	10/30/14	AQ	Ground Water	MW-15D
FA19534-10	10/29/14	09:35	RMJB	10/30/14	AQ	Ground Water	MW-18
FA19534-11	10/29/14	10:20	RMJB	10/30/14	AQ	Ground Water	MW-15D1
FA19534-12	10/29/14	10:25	RMJB	10/30/14	AQ	Ground Water	MW-10D
FA19534-13	10/29/14	11:25	RMJB	10/30/14	AQ	Ground Water	MW-10

Accutest Laboratories

Sample Summary
(continued)

United Technologies Corporation

Job No: FA19534

AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Project No: 60314964

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA19534-14	10/29/14	11:37	RMJB	10/30/14	AQ	Ground Water	MW-16
FA19534-15	10/29/14	11:37	RMJB	10/30/14	AQ	Ground Water	MW-16-A
FA19534-16	10/29/14	12:18	RMJB	10/30/14	AQ	Ground Water	MW-16D
FA19534-17	10/29/14	12:40	RMJB	10/30/14	AQ	Ground Water	MW-9
FA19534-18	10/29/14	14:15	RMJB	10/30/14	AQ	Ground Water	MW-13D
FA19534-19	10/29/14	14:48	RMJB	10/30/14	AQ	Ground Water	MW-12D
FA19534-20	10/29/14	15:10	RMJB	10/30/14	AQ	Ground Water	IDW
FA19534-21	10/29/14	15:20	RMJB	10/30/14	AQ	Ground Water	POTABLE-1
FA19534-22	10/28/14	00:00	RMJB	10/30/14	AQ	Trip Blank Water	MW-14D-C
FA19534-23	10/29/14	14:15	RMJB	10/30/14	AQ	Ground Water	MW-13D-A

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA19534

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date:** 11/10/2014 4:45:26

22 Sample(s) and 1 Trip Blank were collected on/between 10/28/2014 and 10/29/2014 and were received at Accutest SE on 10/30/2014 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of FA19534. 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: AQ **Batch ID:** VM3324

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19399-1MS, FA19399-1MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Carbon disulfide are outside control limits. Recovery was above upper control limit, but samples were ND for Carbon disulfide. Data integrity not adversely affected.

Sample(s) FA19399-1MS, FA19399-1MSD have 4-Bromofluorobenzene surrogate outside control limits. Probable cause is due to matrix interference.

FA19534-1 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-1: Sample was not preserved to a pH < 2.

FA19534-2 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-2: Sample was not preserved to a pH < 2.

FA19534-3 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-3: Sample was not preserved to a pH < 2.

FA19534-4 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-4: Sample was not preserved to a pH < 2.

FA19534-5 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-5: Sample was not preserved to a pH < 2.

FA19534-6 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-6: Sample was not preserved to a pH < 2.

FA19534-7 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-7: Sample was not preserved to a pH < 2.

FA19534-8 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-8: Sample was not preserved to a pH < 2.

FA19534-9 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-9: Sample was not preserved to a pH < 2.

FA19534-10 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-10: Sample was not preserved to a pH < 2.

FA19534-11 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-11: Sample was not preserved to a pH < 2.

FA19534-12 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-12: Sample was not preserved to a pH < 2.

FA19534-13 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-13: Sample was not preserved to a pH < 2.

FA19534-14 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-14: Sample was not preserved to a pH < 2.

FA19534-15 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-15: Sample was not preserved to a pH < 2.

FA19534-16 for Carbon disulfide: Associated BS recovery outside control limits.
FA19534-16: Sample was not preserved to a pH < 2.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VM3326

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19534-13MS, FA19534-13MSD were used as the QC samples indicated.

Sample(s) FA19534-13MSD has 4-Bromofluorobenzene surrogates outside control limits. Probable cause is due to matrix interference.

FA19534-13: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VN3547

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19534-17MS, FA19534-17MSD were used as the QC samples indicated.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount. For method performance in a clean matrix, refer to Blank Spike. % RPD was within control limits for Tetrachloroethylene.

RPD(s) for MSD for Acetone are outside control limits for sample FA19534-17MSD. Probable cause is due to sample non-homogeneity.

FA19534-17: Sample was not preserved to a pH < 2.
FA19534-18: Sample was not preserved to a pH < 2.
FA19534-19: Sample was not preserved to a pH < 2.
FA19534-20: Sample was not preserved to a pH < 2.
FA19534-21: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VN3549

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA19358-5MS, FA19358-5MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Acetone, 2-Hexanone were outside control limits. Recoveries were above upper control limits, but sample was ND for Acetone, 2-Hexanone. Data integrity not adversely affected.

Matrix Spike Recovery(s) for cis-1,2-Dichloroethylene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike. % RPD was within control limits in MS/MSD for cis-1,2-Dichloroethylene .
FA19534-20: Sample was not preserved to a pH < 2.
FA19534-23 for Acetone: Associated BS recovery outside control limits.
FA19534-23 for 2-Hexanone: Associated BS recovery outside control limits.
FA19534-23: Sample was not preserved to a pH < 2.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP53740

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) FA19516-1MS, FA19516-1MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Benzoic Acid are outside control limits. Recovery was within control limits in MS/MSD.

Matrix Spike Recovery(s) for 4-Bromophenyl phenyl ether are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike. % RPD was within control limits in MS/MSD.

FA19534-20 for Benzoic Acid: Associated BS recovery outside control limits.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP28168

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) FA19537-2DUP, FA19537-2MS, FA19537-2MSD, FA19537-2PS, FA19537-2SDL were used as the QC samples.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Potassium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Serial Dilution for Chromium, Nickel, Zinc are outside control limits for sample MP28168-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP28168

MP28168-PS1 for Sodium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP28168-PS1 for Potassium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP28152

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) FA19516-1DUP, FA19516-1MS, FA19516-1MSD, FA19516-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP28152-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

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: November 10, 2014

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA19534
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 10/28/14 thru 10/29/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA19534-1	**MW-14D**					
1,1-Dichloroethylene [a]		1.2	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		0.65 J	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		79.3	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		0.56 J	1.0	0.30	ug/l	SW846 8260B
FA19534-2	**MW-14D-A**					
1,1-Dichloroethylene [a]		1.0	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		0.58 J	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		64.2	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		0.41 J	1.0	0.30	ug/l	SW846 8260B
FA19534-3	**MW-23D**					
No hits reported in this sample.						
FA19534-4	**MW-3**					
Tetrachloroethylene [a]		49.9	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		1.4	1.0	0.30	ug/l	SW846 8260B
FA19534-5	**MW-3D**					
1,1-Dichloroethylene [a]		16.2	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		5.9	1.0	0.33	ug/l	SW846 8260B
1,1,1-Trichloroethane [a]		0.58 J	1.0	0.34	ug/l	SW846 8260B
Tetrachloroethylene [a]		384	10	2.6	ug/l	SW846 8260B
Trichloroethylene [a]		4.2	1.0	0.30	ug/l	SW846 8260B
FA19534-6	**MW-3D1**					
No hits reported in this sample.						
FA19534-7	**MW-17**					
No hits reported in this sample.						
FA19534-8	**MW-15**					
No hits reported in this sample.						

Summary of Hits

Job Number: FA19534
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 10/28/14 thru 10/29/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA19534-9	**MW-15D**					
No hits reported in this sample.						
FA19534-10	**MW-18**					
No hits reported in this sample.						
FA19534-11	**MW-15D1**					
No hits reported in this sample.						
FA19534-12	**MW-10D**					
No hits reported in this sample.						
FA19534-13	**MW-10**					
1,1-Dichloroethane [a]		0.37 J	1.0	0.26	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		32.7	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		664	10	3.3	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		0.51 J	1.0	0.34	ug/l	SW846 8260B
Tetrachloroethylene [a]		136	10	2.6	ug/l	SW846 8260B
Toluene [a]		2.6	1.0	0.20	ug/l	SW846 8260B
Trichloroethylene [a]		36.9	1.0	0.30	ug/l	SW846 8260B
FA19534-14	**MW-16**					
No hits reported in this sample.						
FA19534-15	**MW-16-A**					
No hits reported in this sample.						
FA19534-16	**MW-16D**					
No hits reported in this sample.						
FA19534-17	**MW-9**					
1,1-Dichloroethylene [a]		2.2	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		92.2	1.0	0.33	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		0.59 J	1.0	0.34	ug/l	SW846 8260B
Tetrachloroethylene [a]		727	10	2.6	ug/l	SW846 8260B
Trichloroethylene [a]		159	10	3.0	ug/l	SW846 8260B

Summary of Hits

Job Number: FA19534
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 10/28/14 thru 10/29/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA19534-18	**MW-13D**					
1,1-Dichloroethylene [a]		2.0	1.0	0.25	ug/l	SW846 8260B
Tetrachloroethylene [a]		47.6	1.0	0.26	ug/l	SW846 8260B
FA19534-19	**MW-12D**					
1,1-Dichloroethylene [a]		0.64 J	1.0	0.25	ug/l	SW846 8260B
Tetrachloroethylene [a]		25.5	1.0	0.26	ug/l	SW846 8260B
FA19534-20	**IDW**					
1,1-Dichloroethylene [a]		1.1	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		29.7	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		93.9	2.5	0.64	ug/l	SW846 8260B
Trichloroethylene [a]		5.9	1.0	0.30	ug/l	SW846 8260B
Aluminum		4220	200	15	ug/l	SW846 6010C
Antimony		4.2 J	6.0	2.3	ug/l	SW846 6010C
Barium		72.3 J	200	1.0	ug/l	SW846 6010C
Calcium		33500	1000	50	ug/l	SW846 6010C
Chromium		14.4	10	2.0	ug/l	SW846 6010C
Cobalt		0.50 J	50	0.50	ug/l	SW846 6010C
Copper		2.4 J	25	1.0	ug/l	SW846 6010C
Iron		4950	300	17	ug/l	SW846 6010C
Magnesium		1150 J	5000	56	ug/l	SW846 6010C
Manganese		67.6	15	1.0	ug/l	SW846 6010C
Nickel		3.7 J	40	0.50	ug/l	SW846 6010C
Potassium		4030 J	10000	200	ug/l	SW846 6010C
Sodium		13200	10000	500	ug/l	SW846 6010C
Vanadium		6.7 J	50	0.50	ug/l	SW846 6010C
Zinc		18.5 J	20	3.0	ug/l	SW846 6010C
FA19534-21	**POTABLE-1**					
Chloroform [a]		0.90 J	1.0	0.31	ug/l	SW846 8260B
FA19534-22	**MW-14D-C**					
No hits reported in this sample.						
FA19534-23	**MW-13D-A**					
1,1-Dichloroethylene [a]		1.9	1.0	0.25	ug/l	SW846 8260B
Tetrachloroethylene [a]		60.7	1.0	0.26	ug/l	SW846 8260B

Summary of Hits

Job Number: FA19534
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 10/28/14 thru 10/29/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

(a) Sample was not preserved to a pH < 2.

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-14D		
Lab Sample ID:	FA19534-1	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78560.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	1.2	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.65	1.0	0.33	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	79.3	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	0.56	1.0	0.30	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14D		
Lab Sample ID:	FA19534-1	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	90%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-14D-A		
Lab Sample ID:	FA19534-2	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78576.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	1.0	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.58	1.0	0.33	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	64.2	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	0.41	1.0	0.30	ug/l	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14D-A		
Lab Sample ID:	FA19534-2	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-23D		
Lab Sample ID:	FA19534-3	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78561.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-23D		
Lab Sample ID:	FA19534-3	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-3		
Lab Sample ID:	FA19534-4	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78562.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	49.9	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	1.4	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	FA19534-4	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	90%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-3D		
Lab Sample ID:	FA19534-5	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78563.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2 [a]	M78564.D	10	10/31/14	RB	n/a	n/a	VM3324

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	16.2	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.9	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.58	1.0	0.34	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	384 [c]	10	2.6	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	4.2	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3D		
Lab Sample ID:	FA19534-5	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	98%	79-125%
2037-26-5	Toluene-D8	95%	95%	85-112%
460-00-4	4-Bromofluorobenzene	93%	91%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3D1		
Lab Sample ID:	FA19534-6	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78565.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-3D1		
Lab Sample ID:	FA19534-6	**Date Sampled:**	10/28/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		83-118%
17060-07-0	1,2-Dichloroethane-D4	96%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	88%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-17		
Lab Sample ID:	FA19534-7	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78566.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17		
Lab Sample ID:	FA19534-7	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	93%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	85%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-15		
Lab Sample ID:	FA19534-8	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78567.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA19534-8	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	90%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15D		
Lab Sample ID:	FA19534-9	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78568.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-15D		
Lab Sample ID:	FA19534-9	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	86%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18		
Lab Sample ID:	FA19534-10	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78569.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18		
Lab Sample ID:	FA19534-10	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	91%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-15D1		
Lab Sample ID:	FA19534-11	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78570.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15D1		
Lab Sample ID:	FA19534-11	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-10D		
Lab Sample ID:	FA19534-12	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78571.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-10D		
Lab Sample ID:	FA19534-12	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	88%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-10		
Lab Sample ID:	FA19534-13	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78572.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2 [a]	M78624.D	10	11/01/14	RB	n/a	n/a	VM3326

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	0.37	1.0	0.26	ug/l	J
75-35-4	1,1-Dichloroethylene	32.7	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	664 [c]	10	3.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.51	1.0	0.34	ug/l	J
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	136 [c]	10	2.6	ug/l	
108-88-3	Toluene	2.6	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	36.9	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-10		
Lab Sample ID:	FA19534-13	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	110%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	101%	79-125%
2037-26-5	Toluene-D8	97%	95%	85-112%
460-00-4	4-Bromofluorobenzene	85%	93%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16		
Lab Sample ID:	FA19534-14	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78573.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-16		
Lab Sample ID:	FA19534-14	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	96%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-16-A		
Lab Sample ID:	FA19534-15	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78574.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-16-A		
Lab Sample ID:	FA19534-15	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-16D		
Lab Sample ID:	FA19534-16	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M78575.D	1	10/31/14	RB	n/a	n/a	VM3324
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide [b]	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16D		
Lab Sample ID:	FA19534-16	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	93%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-9		
Lab Sample ID:	FA19534-17	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080535.D	1	10/31/14	RB	n/a	n/a	VN3547
Run #2 [a]	N0080536.D	10	10/31/14	RB	n/a	n/a	VN3547

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	2.2	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	92.2	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.59	1.0	0.34	ug/l	J
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	727 [b]	10	2.6	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	159 [b]	10	3.0	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-9		
Lab Sample ID:	FA19534-17	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	95%	79-125%
2037-26-5	Toluene-D8	89%	91%	85-112%
460-00-4	4-Bromofluorobenzene	98%	96%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-13D		
Lab Sample ID:	FA19534-18	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080537.D	1	10/31/14	RB	n/a	n/a	VN3547
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	2.0	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	47.6	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-13D		
Lab Sample ID:	FA19534-18	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	95%		79-125%
2037-26-5	Toluene-D8	88%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12D		
Lab Sample ID:	FA19534-19	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080538.D	1	10/31/14	RB	n/a	n/a	VN3547
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	0.64	1.0	0.25	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	25.5	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12D		
Lab Sample ID:	FA19534-19	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	94%		79-125%
2037-26-5	Toluene-D8	89%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	IDW		
Lab Sample ID:	FA19534-20	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080539.D	1	10/31/14	RB	n/a	n/a	VN3547
Run #2 [a]	N0080577.D	2.5	11/02/14	RB	n/a	n/a	VN3549

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	1.1	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	29.7	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	93.9 [b]	2.5	0.64	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	5.9	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IDW		
Lab Sample ID:	FA19534-20	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	105%	79-125%
2037-26-5	Toluene-D8	89%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	100%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IDW		
Lab Sample ID:	FA19534-20	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T015219.D	1	11/03/14	NJ	10/31/14	OP53740	ST713
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [a]	ND	49	9.7	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.9	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.9	0.56	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.7	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.9	0.49	ug/l	
	3&4-Methylphenol	ND	4.9	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.9	0.58	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.9	ug/l	
108-95-2	Phenol	ND	4.9	0.49	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.9	0.95	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.9	0.54	ug/l	
83-32-9	Acenaphthene	ND	4.9	0.49	ug/l	
208-96-8	Acenaphthylene	ND	4.9	0.49	ug/l	
120-12-7	Anthracene	ND	4.9	0.60	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.78	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.9	0.65	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.79	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.97	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.9	0.54	ug/l	
106-47-8	4-Chloroaniline	ND	4.9	0.49	ug/l	
86-74-8	Carbazole	ND	4.9	0.60	ug/l	
218-01-9	Chrysene	ND	4.9	0.70	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.67	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	IDW		
Lab Sample ID:	FA19534-20	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.9	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.9	0.49	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.9	0.49	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.9	0.49	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.9	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.79	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.97	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.97	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.97	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.68	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.97	ug/l	
67-72-1	Hexachloroethane	ND	4.9	0.49	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.61	ug/l	
78-59-1	Isophorone	ND	4.9	0.49	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	4.9	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.59	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.74	ug/l	
91-20-3	Naphthalene	ND	4.9	0.49	ug/l	
98-95-3	Nitrobenzene	ND	4.9	0.49	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.9	0.49	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.9	0.52	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.58	ug/l	
129-00-0	Pyrene	ND	4.9	0.79	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		14-67%
4165-62-2	Phenol-d5	27%		10-50%
118-79-6	2,4,6-Tribromophenol	79%		33-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IDW		
Lab Sample ID:	FA19534-20	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	86%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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: IDW
Lab Sample ID: FA19534-20
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 10/29/14
Date Received: 10/30/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4220	200	15	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Antimony	4.2 J	6.0	2.3	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Barium	72.3 J	200	1.0	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Calcium	33500	1000	50	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	14.4	10	2.0	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cobalt	0.50 J	50	0.50	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	2.4 J	25	1.0	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Iron	4950	300	17	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Magnesium	1150 J	5000	56	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Manganese	67.6	15	1.0	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	11/03/14	11/03/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	3.7 J	40	0.50	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Potassium	4030 J	10000	200	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Sodium	13200	10000	500	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Vanadium	6.7 J	50	0.50	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	18.5 J	20	3.0	ug/l	1	11/06/14	11/06/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12008
(2) Instrument QC Batch: MA12018
(3) Prep QC Batch: MP28152
(4) Prep QC Batch: MP28168

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	POTABLE-1		
Lab Sample ID:	FA19534-21	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080540.D	1	10/31/14	RB	n/a	n/a	VN3547
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	0.90	1.0	0.31	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	POTABLE-1		
Lab Sample ID:	FA19534-21	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	94%		79-125%
2037-26-5	Toluene-D8	90%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample was not preserved to a pH < 2.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-14D-C		
Lab Sample ID:	FA19534-22	**Date Sampled:**	10/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0080541.D	1	10/31/14	RB	n/a	n/a	VN3547
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14D-C		
Lab Sample ID:	FA19534-22	**Date Sampled:**	10/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	94%		79-125%
2037-26-5	Toluene-D8	90%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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:	MW-13D-A		
Lab Sample ID:	FA19534-23	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0080574.D	1	11/02/14	RB	n/a	n/a	VN3549
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	1.9	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone [b]	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	60.7	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-13D-A		
Lab Sample ID:	FA19534-23	**Date Sampled:**	10/29/14
Matrix:	AQ - Ground Water	**Date Received:**	10/30/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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

FA19534

AECOM PO# 56785ACM

AECOM

Chain of Custody and Analytical Request

Page 1 of 2
Project Number: 60314964
Chain of Custody Number (1): 10272014-01
LIMS Number:

Project Name / Location: UTC Delaware Spray Technologies Site, Bamberg SC

Client Name: UTC

Collected by: R. Morgan, J Butler

Project Manager: Walter Gerald 864-234-8425

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310D)	Nitrate, Nitrite, Sulfate, Chloride (9056)	Mercury, Gross, Gross (PR524)	SVOCs (8270D)	TPH Metals (6010C/7470B)						Quality Assurance Samples: COMMENTS	Cooler ID
1 MW-14D	28-oct-2014	1435		X			X												
22 MW-14D-c	28-oct-2014	1435		X			X												
2 MW-14D-a	28-oct-2014	1435		X			X												
3 MW-23D	28-oct-2014	1540		X			X												
4 MW-3	28-oct-2014	1545		X			X												
5 MW-3D	28-oct-2014	1625		X			X												
6 MW-3D1	28-oct-2014	1700		X			X												
7 MW-17	29-oct-2014	0840		X			X												
8 MW-15	29-oct-2014	0843		X			X												
9 MW-15D	29-oct-2014	0927		X			X												
10 MW-18	29-oct-2014	0935		X			X												
11 MW-15D1	29-oct-2014	1020		X			X												
12 MW-10D	29-oct-2014	1025		X			X												
13 MW-10	29-oct-2014	1125		X			X												
14 MW-16	29-oct-2014	1137		X			X												

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	10/29/14	1530	1. [signature]		
2. [signature]	10/30/14	930	2. [signature]		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped:
Airbill #: 8063 1883 8039
Location: Orlando FL
Date:
Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

2-6

ZL VOCs by 8260B – unpreserved vials – 7 day holding time

Nitrate/Nitrite – 48 hr holding time

AECOM chemist: Dori Cullum
864-234-8922 doria.cullum@aecom.com

52745\admin\project control\project forms\Blank COC

5.1 5

FA19534

AECOM PO# 56785ACM

AECOM

Chain of Custody and Analytical Request

Page 2 of 2
Project Number: 60314964
Chain of Custody Number (1): 10272014-01
LIMS Number:

Project Name / Location: UTC Delaware Spray Technologies Site, Bamberg SC

Client Name: UTC

Collected by: R. Morgan, J. Butler

Project Manager: Walter Gerald 864-234-8425

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310B)	Nitrate, Nitrite & Silicate Filtered (9056)	Matrix, Gross, PB (9310)	SVOCs (8270D)	TPH Minerals (8015C) (8100B)						Quality Assurance Samples: COMMENTS	Cooler ID
15 MW-16-a	29-oct-2014	1137		X			X												
16 MW-16D	29-oct-2014	1218		X			X												
MW-9	29-oct-2014	1240		X			X												
17 MW-9-MS	29-oct-2014	1240		X			X												
MW-9-MSD	29-oct-2014	1240		X			X												
18 MW-13D	29-oct-2014	1415		X			X												
19 MW-12D	29-oct-2014	1448		X			X												
20 IDW	29-oct-2014	1510		X			X				X	X							
21 Potable-1	29-oct-2014	1520		X			X												

10/29/14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.		10/29/14	1530			
2.	FX	10-30-14	930			
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped:
Airbill #: 8063 1883 8039
Location: Orlando FL
Date: Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

2L VOCs by 8260B – unpreserved vials – 7 day holding time
Nitrate/Nitrite – 48 hr holding time

AECOM chemist: Dori Cullom
864-234-8922 doria.cullom@aecom.com

52745\admin\project control\project forms\Blank COC

5.1 5

FA19534: Chain of Custody
Page 2 of 6

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA19534 CLIENT: AECOM PROJECT: UTC Delaware

DATE/TIME RECEIVED: 10-30-14 930 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8063 1883 8039

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

TRIP BLANK INFORMATION

- [X] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [X] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [X] 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: 22
- [ ] CORRECTED TEMPS: 26

SAMPLE INFORMATION

- [ ] 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)
- [X] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [X] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: No Vials For MW-14D-C, Received 3 Extra Vials MW-13D-a 10-29-14 1415 Will be sample # 23 trip Blanks is # 22 Vials are unpreserved

TECHNICIAN SIGNATURE/DATE 10-30-14 REVIEWER SIGNATURE/DATE 10/30/14

RS 04/14

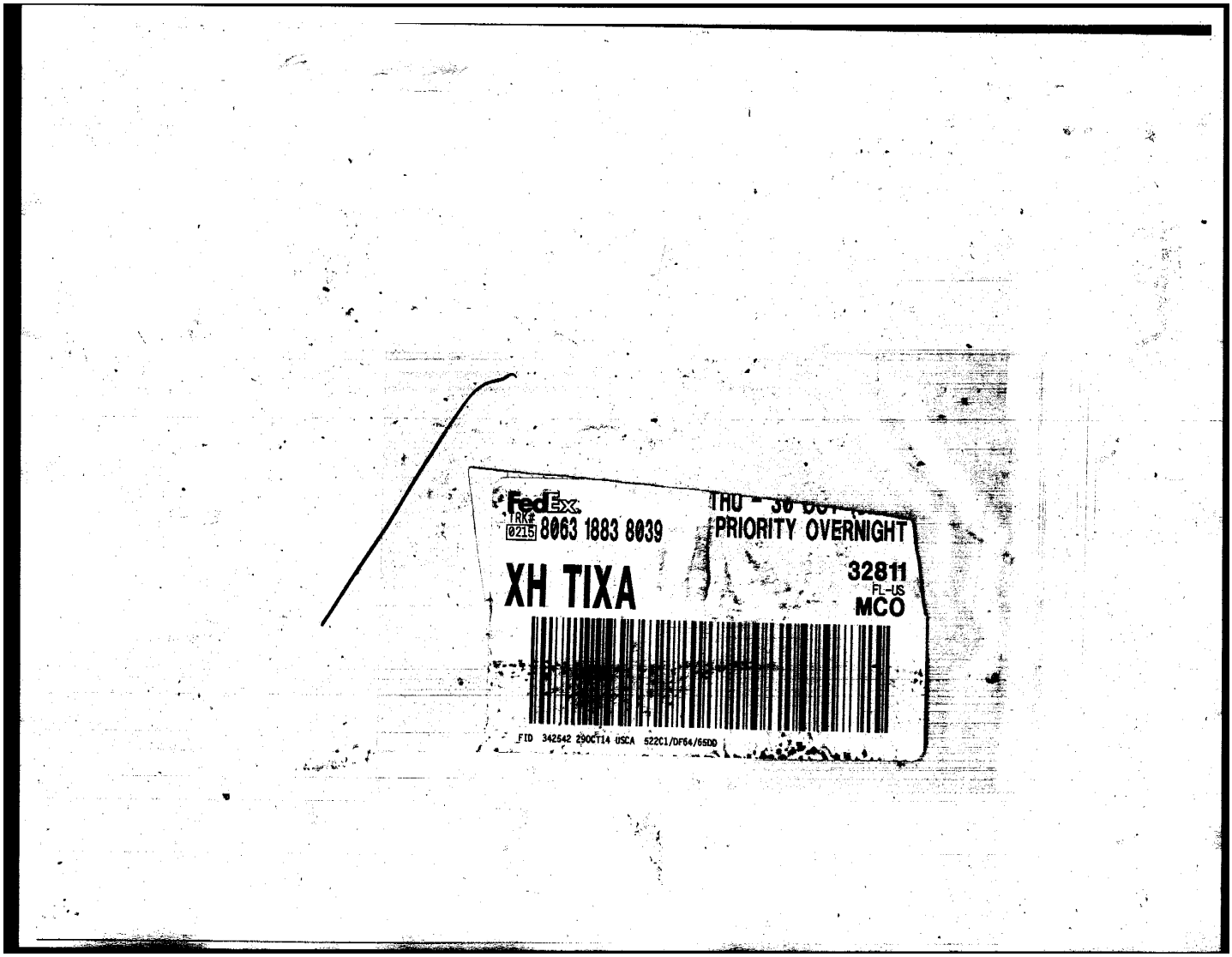
receipt confirmation 041514.xls

5.1

5

FA19534: Chain of Custody

Page 3 of 6



FA19534: Chain of Custody
Page 4 of 6

AECOM

Chain of Custody and Analytical Request

AECOM PO# 56785ACM

Page 1 of 2

Project Number: 60514964

Chain of Custody Number (1): 10272014-D1

LIMS Number:

Project Name / Number: LITC Delaware Spray Technologies Site, Bamberg SC

Client Name: LITC

Collected by: R. Morgan, J. Butler

Project Manager: Walter Gerald 864-234-8425

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310D)	Nitrate, Nitrite, Chloride, Sulfate, Fluoride (300.0)	SVOCs (8270D)	Pesticides (8081B)						Quality Assurance Samples: COMMENTS	Cooler ID
MW-14D	28-oct-2014	1435		X			X											
MW-14D-c	28-oct-2014	1435		X			X										Lab provided Trip Blank	
MW-14D-a	28-oct-2014	1435		X			X											
MW-23D	28-oct-2014	1540		X			X											
MW-3	28-oct-2014	1545		X			X											
MW-30	28-oct-2014	1625		X			X											
MW-301	28-oct-2014	1700		X			X											
MW-17	29-oct-2014	0840		X			X											
MW-15	29-oct-2014	0853		X			X											
MW-15D	29-oct-2014	0927		X			X											
MW-19	29-oct-2014	0935		X			X											
MW-15D1	29-oct-2014	1020		X			X											
MW-10D	29-oct-2014	1025		X			X											
MW-10	29-oct-2014	1125		X			X											
MW-16	29-oct-2014	1137		X			X											

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	10/29/14	1530	1.		
2.				2.		
3.				3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:		Shipped:	
Method of Shipment:	FedEx	Airbill #:	8063 1283 3033
Analytical Lab:	Accutest	Location:	Orlando FL
Lab Recipient:		Date:	Time:

1.) Chain of Custody Number - date collected + custody number (e.g. 01-19-2004-01)

FCL VOCs by 8260B – unpreserved vials – 7 day holding time

Nitrate/Nitrite – 48 hr holding time

AECOM chemist: Dori Cullum

864-234-8922 doria.cullum@aecom.com

5274 Subdivision projects\contract projects\LITC Bluff COC

5.1 5

Aecom PO# 56785ACM

AECOM

Chain of Custody and Analytical Request

Page 2 of 2
Project Number: 60314964
Chain of Custody Number (1): 10292014-01
LIMS Number:

Project Name / Location: UTC Delaware Spray Technologies Site, Barnwell, SC
Client Name: UTC
Collected by: R. Morgan, J. Butler
Project Manager: Walter Ewald 864-234-8825

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (hh:hhmm)	See Comments: COMP	GRAB	Well	Sample Information	VOCs (8260B)	TOC (5310B)	Nitrate, Nitrite, Total Kjeldahl Nitrogen, Ortho-P (353.2)	SVOCs (8270D)	Pesticides (8081B)							Quality Assurance Samples: COMMENTS	Cooler ID
MW-16-a	29-oct-2014	1137		X			X												
MW-16D	29-oct-2014	1248		X			X												
MW-9	29-oct-2014	1240		X			X												
MW-9-MS	29-oct-2014	1240		X			X												
MW-9-MSD	29-oct-2014	1240		X			X												
MW-13D	29-oct-2014	1415		X			X												
MW-12D	29-oct-2014	1448		X			X												
TDW	29-oct-2014	1510		X			X			X	X								
Potable-1	29-oct-2014	1620		X			X												
~~MW-13D-a~~	~~29-oct-2014~~	~~1415~~		~~X~~			~~X~~												

10/29/14

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	10/29/14	1530	1.		
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:		Shipped:	
Method of Shipment:	FedEx	Airbill #:	8013 1883 8039
Analytical Lab:	Accutest	Location:	Orlando FL
Lab Recipient:		Date:	Time:

(1) Chain of Custody Number = date collected + custody number (e.g. 01-10-2004-01)

FCL VOCs by 8260B – unpreserved vials – 7 day holding time
Nitrate/Nitrite – 48 hr holding time

Aecom chemist: Dori Cullom
864-234-8922 doria.cullom@aecom.com

527-45 submit\project control\project forms\Blank COC

5.1

5

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: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3547-MB	N0080526.D	1	10/31/14	RB	n/a	n/a	VN3547

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-17, FA19534-18, FA19534-19, FA19534-20, FA19534-21, FA19534-22

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3547-MB	N0080526.D	1	10/31/14	RB	n/a	n/a	VN3547

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-17, FA19534-18, FA19534-19, FA19534-20, FA19534-21, FA19534-22

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	79-125%
2037-26-5	Toluene-D8	90%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3324-MB	M78556.D	1	10/31/14	RB	n/a	n/a	VM3324

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-1, FA19534-2, FA19534-3, FA19534-4, FA19534-5, FA19534-6, FA19534-7, FA19534-8, FA19534-9, FA19534-10, FA19534-11, FA19534-12, FA19534-13, FA19534-14, FA19534-15, FA19534-16

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3324-MB	M78556.D	1	10/31/14	RB	n/a	n/a	VM3324

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-1, FA19534-2, FA19534-3, FA19534-4, FA19534-5, FA19534-6, FA19534-7, FA19534-8, FA19534-9, FA19534-10, FA19534-11, FA19534-12, FA19534-13, FA19534-14, FA19534-15, FA19534-16

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	86%	83-118%

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3326-MB	M78607.D	1	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-13

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	89%	83-118%

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3549-MB	N0080572.D	1	11/02/14	RB	n/a	n/a	VN3549

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-20, FA19534-23

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	11	ug/l	
71-43-2	Benzene	ND	1.0	0.24	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.26	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.40	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.25	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.24	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.36	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.28	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	1.5	ug/l	
100-42-5	Styrene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.66	ug/l	

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3549-MB	N0080572.D	1	11/02/14	RB	n/a	n/a	VN3549

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-20, FA19534-23

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3547-BS	N0080524.D	1	10/31/14	RB	n/a	n/a	VN3547

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-17, FA19534-18, FA19534-19, FA19534-20, FA19534-21, FA19534-22

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	125	100	50-147
71-43-2	Benzene	25	28.2	113	81-122
75-27-4	Bromodichloromethane	25	24.5	98	79-123
75-25-2	Bromoform	25	23.0	92	66-123
108-90-7	Chlorobenzene	25	30.1	120	82-124
75-00-3	Chloroethane	25	27.5	110	62-144
67-66-3	Chloroform	25	26.2	105	80-124
75-15-0	Carbon disulfide	25	33.1	132	66-148
56-23-5	Carbon tetrachloride	25	27.2	109	76-136
75-34-3	1,1-Dichloroethane	25	28.5	114	81-122
75-35-4	1,1-Dichloroethylene	25	29.8	119	78-137
107-06-2	1,2-Dichloroethane	25	25.0	100	75-125
78-87-5	1,2-Dichloropropane	25	27.2	109	76-124
124-48-1	Dibromochloromethane	25	24.6	98	78-122
156-59-2	cis-1,2-Dichloroethylene	25	26.4	106	78-120
10061-01-5	cis-1,3-Dichloropropene	25	24.9	100	75-118
156-60-5	trans-1,2-Dichloroethylene	25	27.8	111	76-127
10061-02-6	trans-1,3-Dichloropropene	25	25.1	100	80-120
100-41-4	Ethylbenzene	25	27.2	109	81-121
591-78-6	2-Hexanone	125	118	94	61-129
108-10-1	4-Methyl-2-pentanone	125	116	93	66-122
74-83-9	Methyl bromide	25	25.9	104	59-143
74-87-3	Methyl chloride	25	28.6	114	50-159
75-09-2	Methylene chloride	25	25.8	103	69-135
78-93-3	Methyl ethyl ketone	125	113	90	56-143
100-42-5	Styrene	25	26.9	108	78-119
71-55-6	1,1,1-Trichloroethane	25	27.3	109	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	27.3	109	72-120
79-00-5	1,1,2-Trichloroethane	25	26.1	104	76-119
127-18-4	Tetrachloroethylene	25	24.7	99	76-135
108-88-3	Toluene	25	27.2	109	80-120
79-01-6	Trichloroethylene	25	29.1	116	81-126
75-01-4	Vinyl chloride	25	29.5	118	69-159
1330-20-7	Xylene (total)	75	84.6	113	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3547-BS	N0080524.D	1	10/31/14	RB	n/a	n/a	VN3547

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-17, FA19534-18, FA19534-19, FA19534-20, FA19534-21, FA19534-22

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	87%	79-125%
2037-26-5	Toluene-D8	91%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3324-BS	M78554.D	1	10/31/14	RB	n/a	n/a	VM3324

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-1, FA19534-2, FA19534-3, FA19534-4, FA19534-5, FA19534-6, FA19534-7, FA19534-8, FA19534-9, FA19534-10, FA19534-11, FA19534-12, FA19534-13, FA19534-14, FA19534-15, FA19534-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	158	126	50-147
71-43-2	Benzene	25	24.9	100	81-122
75-27-4	Bromodichloromethane	25	24.9	100	79-123
75-25-2	Bromoform	25	27.4	110	66-123
108-90-7	Chlorobenzene	25	29.2	117	82-124
75-00-3	Chloroethane	25	28.7	115	62-144
67-66-3	Chloroform	25	25.4	102	80-124
75-15-0	Carbon disulfide	25	41.4	166*	66-148
56-23-5	Carbon tetrachloride	25	28.6	114	76-136
75-34-3	1,1-Dichloroethane	25	24.5	98	81-122
75-35-4	1,1-Dichloroethylene	25	32.5	130	78-137
107-06-2	1,2-Dichloroethane	25	25.7	103	75-125
78-87-5	1,2-Dichloropropane	25	24.6	98	76-124
124-48-1	Dibromochloromethane	25	25.6	102	78-122
156-59-2	cis-1,2-Dichloroethylene	25	26.5	106	78-120
10061-01-5	cis-1,3-Dichloropropene	25	24.3	97	75-118
156-60-5	trans-1,2-Dichloroethylene	25	27.8	111	76-127
10061-02-6	trans-1,3-Dichloropropene	25	26.2	105	80-120
100-41-4	Ethylbenzene	25	24.7	99	81-121
591-78-6	2-Hexanone	125	136	109	61-129
108-10-1	4-Methyl-2-pentanone	125	128	102	66-122
74-83-9	Methyl bromide	25	30.4	122	59-143
74-87-3	Methyl chloride	25	30.1	120	50-159
75-09-2	Methylene chloride	25	29.6	118	69-135
78-93-3	Methyl ethyl ketone	125	138	110	56-143
100-42-5	Styrene	25	24.7	99	78-119
71-55-6	1,1,1-Trichloroethane	25	28.3	113	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	23.7	95	72-120
79-00-5	1,1,2-Trichloroethane	25	26.2	105	76-119
127-18-4	Tetrachloroethylene	25	29.9	120	76-135
108-88-3	Toluene	25	27.3	109	80-120
79-01-6	Trichloroethylene	25	27.0	108	81-126
75-01-4	Vinyl chloride	25	29.4	118	69-159
1330-20-7	Xylene (total)	75	80.9	108	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3324-BS	M78554.D	1	10/31/14	RB	n/a	n/a	VM3324

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-1, FA19534-2, FA19534-3, FA19534-4, FA19534-5, FA19534-6, FA19534-7, FA19534-8, FA19534-9, FA19534-10, FA19534-11, FA19534-12, FA19534-13, FA19534-14, FA19534-15, FA19534-16

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	91%	85-112%
460-00-4	4-Bromofluorobenzene	84%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3326-BS	M78605.D	1	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	24.9	100	78-120
127-18-4	Tetrachloroethylene	25	29.5	118	76-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	91%	85-112%
460-00-4	4-Bromofluorobenzene	87%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3549-BS	N0080570.D	1	11/02/14	RB	n/a	n/a	VN3549

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-20, FA19534-23

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	200	160*	50-147
71-43-2	Benzene	25	26.9	108	81-122
75-27-4	Bromodichloromethane	25	25.8	103	79-123
75-25-2	Bromoform	25	23.1	92	66-123
108-90-7	Chlorobenzene	25	28.7	115	82-124
75-00-3	Chloroethane	25	30.5	122	62-144
67-66-3	Chloroform	25	26.5	106	80-124
75-15-0	Carbon disulfide	25	31.3	125	66-148
56-23-5	Carbon tetrachloride	25	26.5	106	76-136
75-34-3	1,1-Dichloroethane	25	26.3	105	81-122
75-35-4	1,1-Dichloroethylene	25	30.1	120	78-137
107-06-2	1,2-Dichloroethane	25	26.0	104	75-125
78-87-5	1,2-Dichloropropane	25	26.3	105	76-124
124-48-1	Dibromochloromethane	25	25.0	100	78-122
156-59-2	cis-1,2-Dichloroethylene	25	26.8	107	78-120
10061-01-5	cis-1,3-Dichloropropene	25	22.7	91	75-118
156-60-5	trans-1,2-Dichloroethylene	25	28.4	114	76-127
10061-02-6	trans-1,3-Dichloropropene	25	25.9	104	80-120
100-41-4	Ethylbenzene	25	27.6	110	81-121
591-78-6	2-Hexanone	125	164	131*	61-129
108-10-1	4-Methyl-2-pentanone	125	140	112	66-122
74-83-9	Methyl bromide	25	29.7	119	59-143
74-87-3	Methyl chloride	25	24.2	97	50-159
75-09-2	Methylene chloride	25	27.6	110	69-135
78-93-3	Methyl ethyl ketone	125	155	124	56-143
100-42-5	Styrene	25	24.6	98	78-119
71-55-6	1,1,1-Trichloroethane	25	26.5	106	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.6	98	72-120
79-00-5	1,1,2-Trichloroethane	25	25.6	102	76-119
127-18-4	Tetrachloroethylene	25	27.5	110	76-135
108-88-3	Toluene	25	26.9	108	80-120
79-01-6	Trichloroethylene	25	28.1	112	81-126
75-01-4	Vinyl chloride	25	25.5	102	69-159
1330-20-7	Xylene (total)	75	87.4	117	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3549-BS	N0080570.D	1	11/02/14	RB	n/a	n/a	VN3549

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-20, FA19534-23

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19399-1MS	M78558.D	1	10/31/14	RB	n/a	n/a	VM3324
FA19399-1MSD	M78559.D	1	10/31/14	RB	n/a	n/a	VM3324
FA19399-1	M78557.D	1	10/31/14	RB	n/a	n/a	VM3324

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-1, FA19534-2, FA19534-3, FA19534-4, FA19534-5, FA19534-6, FA19534-7, FA19534-8, FA19534-9, FA19534-10, FA19534-11, FA19534-12, FA19534-13, FA19534-14, FA19534-15, FA19534-16

CAS No.	Compound	FA19399-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	74.0	59	125	83.2	67	12	50-147/21
71-43-2	Benzene	1.0 U		25	24.6	98	25	24.3	97	1	81-122/14
75-27-4	Bromodichloromethane	1.0 U		25	25.2	101	25	24.7	99	2	79-123/19
75-25-2	Bromoform	1.0 U		25	25.6	102	25	26.0	104	2	66-123/21
108-90-7	Chlorobenzene	1.0 U		25	29.0	116	25	29.2	117	1	82-124/14
75-00-3	Chloroethane	2.0 U		25	28.2	113	25	27.9	112	1	62-144/20
67-66-3	Chloroform	1.0 U		25	24.6	98	25	23.9	96	3	80-124/15
75-15-0	Carbon disulfide	2.0 U		25	30.2	121	25	31.9	128	5	66-148/23
56-23-5	Carbon tetrachloride	1.0 U		25	28.7	115	25	27.2	109	5	76-136/23
75-34-3	1,1-Dichloroethane	1.0 U		25	24.5	98	25	23.5	94	4	81-122/15
75-35-4	1,1-Dichloroethylene	1.0 U		25	32.6	130	25	31.2	125	4	78-137/18
107-06-2	1,2-Dichloroethane	1.0 U		25	25.2	101	25	25.2	101	0	75-125/14
78-87-5	1,2-Dichloropropane	1.0 U		25	24.1	96	25	23.4	94	3	76-124/14
124-48-1	Dibromochloromethane	1.0 U		25	24.5	98	25	24.5	98	0	78-122/19
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	25.5	102	25	26.6	106	4	78-120/15
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	21.1	84	25	20.6	82	2	75-118/23
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	26.3	105	25	25.9	104	2	76-127/17
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	23.0	92	25	23.4	94	2	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	24.2	97	25	23.1	92	5	81-121/14
591-78-6	2-Hexanone	10 U		125	99.1	79	125	105	84	6	61-129/18
108-10-1	4-Methyl-2-pentanone	5.0 U		125	116	93	125	119	95	3	66-122/16
74-83-9	Methyl bromide	2.0 U		25	31.3	125	25	30.9	124	1	59-143/19
74-87-3	Methyl chloride	2.0 U		25	28.4	114	25	28.4	114	0	50-159/19
75-09-2	Methylene chloride	5.0 U		25	28.4	114	25	28.4	114	0	69-135/16
78-93-3	Methyl ethyl ketone	5.0 U		125	99.4	80	125	103	82	4	56-143/18
100-42-5	Styrene	1.0 U		25	24.7	99	25	24.4	98	1	78-119/23
71-55-6	1,1,1-Trichloroethane	1.0 U		25	27.1	108	25	26.7	107	1	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	23.0	92	25	22.4	90	3	72-120/14
79-00-5	1,1,2-Trichloroethane	1.0 U		25	26.1	104	25	26.1	104	0	76-119/14
127-18-4	Tetrachloroethylene	0.83	I	25	30.9	120	25	29.7	115	4	76-135/16
108-88-3	Toluene	1.0 U		25	26.5	106	25	25.9	104	2	80-120/14
79-01-6	Trichloroethylene	1.0 U		25	25.5	102	25	25.0	100	2	81-126/15
75-01-4	Vinyl chloride	1.0 U		25	26.8	107	25	27.3	109	2	69-159/18
1330-20-7	Xylene (total)	3.0 U		75	78.6	105	75	78.1	104	1	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19399-1MS	M78558.D	1	10/31/14	RB	n/a	n/a	VM3324
FA19399-1MSD	M78559.D	1	10/31/14	RB	n/a	n/a	VM3324
FA19399-1	M78557.D	1	10/31/14	RB	n/a	n/a	VM3324

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-1, FA19534-2, FA19534-3, FA19534-4, FA19534-5, FA19534-6, FA19534-7, FA19534-8, FA19534-9, FA19534-10, FA19534-11, FA19534-12, FA19534-13, FA19534-14, FA19534-15, FA19534-16

CAS No.	Surrogate Recoveries	MS	MSD	FA19399-1	Limits
1868-53-7	Dibromofluoromethane	104%	104%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	99%	96%	79-125%
2037-26-5	Toluene-D8	91%	91%	93%	85-112%
460-00-4	4-Bromofluorobenzene	82%*	81%*	88%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19534-17MS	N0080543.D	10	10/31/14	RB	n/a	n/a	VN3547
FA19534-17MSD	N0080544.D	10	10/31/14	RB	n/a	n/a	VN3547
FA19534-17 [a]	N0080535.D	1	10/31/14	RB	n/a	n/a	VN3547
FA19534-17 [a]	N0080536.D	10	10/31/14	RB	n/a	n/a	VN3547

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-17, FA19534-18, FA19534-19, FA19534-20, FA19534-21, FA19534-22

CAS No.	Compound	FA19534-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1250	1210	97	1250	942	75	25*	50-147/21
71-43-2	Benzene	ND		250	270	108	250	258	103	5	81-122/14
75-27-4	Bromodichloromethane	ND		250	238	95	250	233	93	2	79-123/19
75-25-2	Bromoform	ND		250	218	87	250	209	84	4	66-123/21
108-90-7	Chlorobenzene	ND		250	284	114	250	278	111	2	82-124/14
75-00-3	Chloroethane	ND		250	254	102	250	217	87	16	62-144/20
67-66-3	Chloroform	ND		250	248	99	250	235	94	5	80-124/15
75-15-0	Carbon disulfide	ND		250	337	135	250	349	140	3	66-148/23
56-23-5	Carbon tetrachloride	ND		250	248	99	250	237	95	5	76-136/23
75-34-3	1,1-Dichloroethane	ND		250	267	107	250	252	101	6	81-122/15
75-35-4	1,1-Dichloroethylene	2.2		250	274	109	250	258	102	6	78-137/18
107-06-2	1,2-Dichloroethane	ND		250	241	96	250	238	95	1	75-125/14
78-87-5	1,2-Dichloropropane	ND		250	251	100	250	250	100	0	76-124/14
124-48-1	Dibromochloromethane	ND		250	232	93	250	231	92	0	78-122/19
156-59-2	cis-1,2-Dichloroethylene	92.2		250	317	90	250	304	85	4	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		250	228	91	250	233	93	2	75-118/23
156-60-5	trans-1,2-Dichloroethylene	0.59	J	250	263	105	250	246	98	7	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		250	229	92	250	232	93	1	80-120/22
100-41-4	Ethylbenzene	ND		250	256	102	250	248	99	3	81-121/14
591-78-6	2-Hexanone	ND		1250	1120	90	1250	1080	86	4	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		1250	1110	89	1250	1110	89	0	66-122/16
74-83-9	Methyl bromide	ND		250	256	102	250	238	95	7	59-143/19
74-87-3	Methyl chloride	ND		250	280	112	250	271	108	3	50-159/19
75-09-2	Methylene chloride	ND		250	248	99	250	237	95	5	69-135/16
78-93-3	Methyl ethyl ketone	ND		1250	1080	86	1250	1020	82	6	56-143/18
100-42-5	Styrene	ND		250	247	99	250	243	97	2	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		250	255	102	250	239	96	6	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	259	104	250	264	106	2	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		250	252	101	250	251	100	0	76-119/14
127-18-4	Tetrachloroethylene	727 [c]		250	803	30* [b]	250	756	12* [b]	6	76-135/16
108-88-3	Toluene	ND		250	254	102	250	247	99	3	80-120/14
79-01-6	Trichloroethylene	159 [c]		250	403	98	250	386	91	4	81-126/15
75-01-4	Vinyl chloride	ND		250	277	111	250	262	105	6	69-159/18
1330-20-7	Xylene (total)	ND		750	789	105	750	765	102	3	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19534-17MS	N0080543.D	10	10/31/14	RB	n/a	n/a	VN3547
FA19534-17MSD	N0080544.D	10	10/31/14	RB	n/a	n/a	VN3547
FA19534-17 [a]	N0080535.D	1	10/31/14	RB	n/a	n/a	VN3547
FA19534-17 [a]	N0080536.D	10	10/31/14	RB	n/a	n/a	VN3547

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-17, FA19534-18, FA19534-19, FA19534-20, FA19534-21, FA19534-22

CAS No.	Surrogate Recoveries	MS	MSD	FA19534-17	FA19534-17	Limits
1868-53-7	Dibromofluoromethane	101%	100%	103%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	89%	92%	93%	95%	79-125%
2037-26-5	Toluene-D8	91%	91%	89%	91%	85-112%
460-00-4	4-Bromofluorobenzene	91%	93%	98%	96%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19534-13MS	M78626.D	10	11/02/14	RB	n/a	n/a	VM3326
FA19534-13MSD	M78627.D	10	11/02/14	RB	n/a	n/a	VM3326
FA19534-13 [a]	M78624.D	10	11/01/14	RB	n/a	n/a	VM3326

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-13

CAS No.	Compound	FA19534-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	664		250	914	100	250	865	80	6	78-120/15
127-18-4	Tetrachloroethylene	136		250	413	111	250	392	102	5	76-135/16

CAS No.	Surrogate Recoveries	MS	MSD	FA19534-13	Limits
1868-53-7	Dibromofluoromethane	103%	101%	110%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	101%	79-125%
2037-26-5	Toluene-D8	89%	89%	95%	85-112%
460-00-4	4-Bromofluorobenzene	83%	80%*	93%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19358-5MS	N0080589.D	5	11/03/14	RB	n/a	n/a	VN3549
FA19358-5MSD	N0080590.D	5	11/03/14	RB	n/a	n/a	VN3549
FA19358-5	N0080576.D	5	11/02/14	RB	n/a	n/a	VN3549

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-20, FA19534-23

CAS No.	Compound	FA19358-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	130	U	625	439	70	625	455	73	4	50-147/21
71-43-2	Benzene	5.0	U	125	122	98	125	125	100	2	81-122/14
75-27-4	Bromodichloromethane	5.0	U	125	120	96	125	121	97	1	79-123/19
75-25-2	Bromoform	5.0	U	125	98.9	79	125	100	80	1	66-123/21
108-90-7	Chlorobenzene	5.0	U	125	131	105	125	131	105	0	82-124/14
75-00-3	Chloroethane	10	U	125	142	114	125	147	118	3	62-144/20
67-66-3	Chloroform	5.0	U	125	126	101	125	127	102	1	80-124/15
75-15-0	Carbon disulfide	10	U	125	139	111	125	140	112	1	66-148/23
56-23-5	Carbon tetrachloride	5.0	U	125	121	97	125	125	100	3	76-136/23
75-34-3	1,1-Dichloroethane	5.0	U	125	121	97	125	122	98	1	81-122/15
75-35-4	1,1-Dichloroethylene	5.0	U	125	132	106	125	137	110	4	78-137/18
107-06-2	1,2-Dichloroethane	5.0	U	125	124	99	125	125	100	1	75-125/14
78-87-5	1,2-Dichloropropane	5.0	U	125	116	93	125	119	95	3	76-124/14
124-48-1	Dibromochloromethane	5.0	U	125	109	87	125	110	88	1	78-122/19
156-59-2	cis-1,2-Dichloroethylene	222		125	315	74*	125	328	85	4	78-120/15
10061-01-5	cis-1,3-Dichloropropene	5.0	U	125	97.4	78	125	96.6	77	1	75-118/23
156-60-5	trans-1,2-Dichloroethylene	17.6		125	145	102	125	150	106	3	76-127/17
10061-02-6	trans-1,3-Dichloropropene	5.0	U	125	111	89	125	111	89	0	80-120/22
100-41-4	Ethylbenzene	5.0	U	125	124	99	125	125	100	1	81-121/14
591-78-6	2-Hexanone	50	U	625	580	93	625	602	96	4	61-129/18
108-10-1	4-Methyl-2-pentanone	25	U	625	635	102	625	657	105	3	66-122/16
74-83-9	Methyl bromide	10	U	125	136	109	125	133	106	2	59-143/19
74-87-3	Methyl chloride	10	U	125	130	104	125	121	97	7	50-159/19
75-09-2	Methylene chloride	25	U	125	128	102	125	129	103	1	69-135/16
78-93-3	Methyl ethyl ketone	25	U	625	520	83	625	542	87	4	56-143/18
100-42-5	Styrene	5.0	U	125	102	82	125	105	84	3	78-119/23
71-55-6	1,1,1-Trichloroethane	5.0	U	125	124	99	125	126	101	2	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	125	116	93	125	118	94	2	72-120/14
79-00-5	1,1,2-Trichloroethane	5.0	U	125	116	93	125	117	94	1	76-119/14
127-18-4	Tetrachloroethylene	5.0	U	125	122	98	125	123	98	1	76-135/16
108-88-3	Toluene	5.0	U	125	119	95	125	120	96	1	80-120/14
79-01-6	Trichloroethylene	11.3		125	138	101	125	141	104	2	81-126/15
75-01-4	Vinyl chloride	195		125	281	69	125	293	78	4	69-159/18
1330-20-7	Xylene (total)	15	U	375	388	103	375	390	104	1	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA19358-5MS	N0080589.D	5	11/03/14	RB	n/a	n/a	VN3549
FA19358-5MSD	N0080590.D	5	11/03/14	RB	n/a	n/a	VN3549
FA19358-5	N0080576.D	5	11/02/14	RB	n/a	n/a	VN3549

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA19534-20, FA19534-23

CAS No.	Surrogate Recoveries	MS	MSD	FA19358-5	Limits
1868-53-7	Dibromofluoromethane	103%	104%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	103%	104%	79-125%
2037-26-5	Toluene-D8	99%	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	99%	102%	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: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-MB	T015215.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

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	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.97	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	
86-74-8	Carbazole	ND	5.0	0.62	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	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-MB	T015215.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.50	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.57	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.63	ug/l	
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	
91-57-6	2-Methylnaphthalene	ND	5.0	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.61	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.76	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	41%	14-67%
4165-62-2	Phenol-d5	29%	10-50%

Method Blank Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-MB	T015215.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	73%	33-118%
4165-60-0	Nitrobenzene-d5	72%	42-108%
321-60-8	2-Fluorobiphenyl	71%	40-106%
1718-51-0	Terphenyl-d14	88%	39-121%

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: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-BS	T015214.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	7.8	8*	10-69
95-57-8	2-Chlorophenol	50	35.3	71	52-98
59-50-7	4-Chloro-3-methyl phenol	50	36.0	72	54-103
120-83-2	2,4-Dichlorophenol	50	36.9	74	53-103
105-67-9	2,4-Dimethylphenol	50	36.7	73	43-90
51-28-5	2,4-Dinitrophenol	100	88.2	88	44-112
534-52-1	4,6-Dinitro-o-cresol	100	100	100	66-121
95-48-7	2-Methylphenol	50	30.6	61	43-90
	3&4-Methylphenol	100	51.9	52	36-88
88-75-5	2-Nitrophenol	50	38.9	78	53-102
100-02-7	4-Nitrophenol	100	24.2	24	18-62
87-86-5	Pentachlorophenol	100	93.9	94	61-115
108-95-2	Phenol	50	11.7	23	19-56
95-95-4	2,4,5-Trichlorophenol	50	44.2	88	62-109
88-06-2	2,4,6-Trichlorophenol	50	41.6	83	59-107
83-32-9	Acenaphthene	50	43.5	87	61-107
208-96-8	Acenaphthylene	50	43.2	86	60-104
120-12-7	Anthracene	50	44.5	89	65-108
56-55-3	Benzo(a)anthracene	50	45.2	90	66-111
50-32-8	Benzo(a)pyrene	50	44.1	88	62-107
205-99-2	Benzo(b)fluoranthene	50	43.9	88	65-114
191-24-2	Benzo(g,h,i)perylene	50	45.9	92	66-116
207-08-9	Benzo(k)fluoranthene	50	46.2	92	65-114
101-55-3	4-Bromophenyl phenyl ether	50	36.9	74	65-109
85-68-7	Butyl benzyl phthalate	50	47.9	96	65-112
100-51-6	Benzyl Alcohol	50	33.5	67	46-94
91-58-7	2-Chloronaphthalene	50	40.7	81	57-103
106-47-8	4-Chloroaniline	50	40.4	81	49-105
86-74-8	Carbazole	50	44.7	89	59-113
218-01-9	Chrysene	50	47.0	94	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	38.8	78	51-102
111-44-4	bis(2-Chloroethyl)ether	50	38.4	77	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	39.3	79	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	41.0	82	62-105
95-50-1	1,2-Dichlorobenzene	50	34.6	69	48-97
541-73-1	1,3-Dichlorobenzene	50	34.2	68	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-BS	T015214.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	35.6	71	45-98
121-14-2	2,4-Dinitrotoluene	50	43.9	88	61-110
606-20-2	2,6-Dinitrotoluene	50	43.8	88	63-108
91-94-1	3,3'-Dichlorobenzidine	50	45.0	90	46-117
53-70-3	Dibenzo(a,h)anthracene	50	46.5	93	66-119
132-64-9	Dibenzofuran	50	42.6	85	61-106
84-74-2	Di-n-butyl phthalate	50	45.8	92	65-107
117-84-0	Di-n-octyl phthalate	50	47.2	94	62-118
84-66-2	Diethyl phthalate	50	43.1	86	64-108
131-11-3	Dimethyl phthalate	50	43.1	86	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.0	98	61-117
206-44-0	Fluoranthene	50	44.2	88	63-106
86-73-7	Fluorene	50	43.9	88	62-108
118-74-1	Hexachlorobenzene	50	39.8	80	63-108
87-68-3	Hexachlorobutadiene	50	34.9	70	42-102
77-47-4	Hexachlorocyclopentadiene	50	29.7	59	39-102
67-72-1	Hexachloroethane	50	34.0	68	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	42.1	84	64-119
78-59-1	Isophorone	50	38.4	77	43-87
91-57-6	2-Methylnaphthalene	50	38.3	77	51-102
88-74-4	2-Nitroaniline	50	46.4	93	54-128
99-09-2	3-Nitroaniline	50	44.4	89	56-106
100-01-6	4-Nitroaniline	50	46.1	92	55-120
91-20-3	Naphthalene	50	36.6	73	47-100
98-95-3	Nitrobenzene	50	37.9	76	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	42.4	85	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.8	88	64-108
85-01-8	Phenanthrene	50	44.2	88	66-110
129-00-0	Pyrene	50	43.9	88	64-113
120-82-1	1,2,4-Trichlorobenzene	50	33.4	67	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	36%	14-67%
4165-62-2	Phenol-d5	25%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-BS	T015214.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	87%	33-118%
4165-60-0	Nitrobenzene-d5	76%	42-108%
321-60-8	2-Fluorobiphenyl	81%	40-106%
1718-51-0	Terphenyl-d14	93%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-MS	T015221.D	1	11/03/14	NJ	10/31/14	OP53740	ST713
OP53740-MSD	T015222.D	1	11/04/14	NJ	10/31/14	OP53740	ST713
FA19516-1	T015220.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Compound	FA19516-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	48 U		192	44.4	23	192	46.0	24	4	10-69/39
95-57-8	2-Chlorophenol	4.8 U		96.2	60.3	63	96.2	66.5	69	10	52-98/25
59-50-7	4-Chloro-3-methyl phenol	4.8 U		96.2	59.7	62	96.2	68.9	72	14	54-103/23
120-83-2	2,4-Dichlorophenol	4.8 U		96.2	60.3	63	96.2	66.4	69	10	53-103/26
105-67-9	2,4-Dimethylphenol	4.8 U		96.2	57.6	60	96.2	61.6	64	7	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		192	154	80	192	177	92	14	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.5 U		192	164	85	192	189	98	14	66-121/23
95-48-7	2-Methylphenol	4.8 U		96.2	57.0	59	96.2	61.7	64	8	43-90/28
	3&4-Methylphenol	4.8 U		192	105	55	192	111	58	6	36-88/28
88-75-5	2-Nitrophenol	4.8 U		96.2	62.3	65	96.2	69.0	72	10	53-102/29
100-02-7	4-Nitrophenol	24 U		192	76.2	40	192	79.7	41	4	18-62/33
87-86-5	Pentachlorophenol	24 U		192	157	82	192	178	93	13	61-115/26
108-95-2	Phenol	4.8 U		96.2	37.4	39	96.2	37.4	39	0	19-56/35
95-95-4	2,4,5-Trichlorophenol	4.8 U		96.2	70.4	73	96.2	80.4	84	13	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.8 U		96.2	67.0	70	96.2	75.2	78	12	59-107/23
83-32-9	Acenaphthene	4.8 U		96.2	69.3	72	96.2	78.0	81	12	61-107/22
208-96-8	Acenaphthylene	4.8 U		96.2	69.5	72	96.2	76.4	79	9	60-104/22
120-12-7	Anthracene	4.8 U		96.2	70.8	74	96.2	79.8	83	12	65-108/20
56-55-3	Benzo(a)anthracene	4.8 U		96.2	72.0	75	96.2	82.8	86	14	66-111/22
50-32-8	Benzo(a)pyrene	4.8 U		96.2	68.6	71	96.2	80.8	84	16	62-107/23
205-99-2	Benzo(b)fluoranthene	4.8 U		96.2	71.0	74	96.2	82.0	85	14	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.8 U		96.2	70.9	74	96.2	83.0	86	16	66-116/23
207-08-9	Benzo(k)fluoranthene	4.8 U		96.2	72.8	76	96.2	85.5	89	16	65-114/24
101-55-3	4-Bromophenyl phenyl ether	4.8 U		96.2	59.7	62*	96.2	66.9	70	11	65-109/23
85-68-7	Butyl benzyl phthalate	4.8 U		96.2	76.3	79	96.2	89.6	93	16	65-112/24
100-51-6	Benzyl Alcohol	4.8 U		96.2	63.3	66	96.2	66.6	69	5	46-94/27
91-58-7	2-Chloronaphthalene	4.8 U		96.2	65.9	69	96.2	72.7	76	10	57-103/23
106-47-8	4-Chloroaniline	4.8 U		96.2	64.4	67	96.2	69.8	73	8	49-105/27
86-74-8	Carbazole	4.8 U		96.2	72.1	75	96.2	80.8	84	11	59-113/21
218-01-9	Chrysene	4.8 U		96.2	73.6	77	96.2	84.4	88	14	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	4.8 U		96.2	60.3	63	96.2	67.4	70	11	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.8 U		96.2	60.1	63	96.2	66.6	69	10	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.8 U		96.2	61.3	64	96.2	68.0	71	10	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	4.8 U		96.2	66.7	69	96.2	75.5	79	12	62-105/20
95-50-1	1,2-Dichlorobenzene	4.8 U		96.2	58.3	61	96.2	65.6	68	12	48-97/24
541-73-1	1,3-Dichlorobenzene	4.8 U		96.2	57.9	60	96.2	64.6	67	11	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-MS	T015221.D	1	11/03/14	NJ	10/31/14	OP53740	ST713
OP53740-MSD	T015222.D	1	11/04/14	NJ	10/31/14	OP53740	ST713
FA19516-1	T015220.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Compound	FA19516-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	4.8 U		96.2	60.1	63	96.2	67.0	70	11	45-98/25
121-14-2	2,4-Dinitrotoluene	4.8 U		96.2	69.3	72	96.2	80.5	84	15	61-110/21
606-20-2	2,6-Dinitrotoluene	4.8 U		96.2	69.2	72	96.2	80.2	83	15	63-108/21
91-94-1	3,3'-Dichlorobenzidine	4.8 U		96.2	73.0	76	96.2	84.7	88	15	46-117/29
53-70-3	Dibenzo(a,h)anthracene	4.8 U		96.2	72.2	75	96.2	85.1	89	16	66-119/24
132-64-9	Dibenzofuran	4.8 U		96.2	68.0	71	96.2	77.3	80	13	61-106/21
84-74-2	Di-n-butyl phthalate	4.8 U		96.2	73.8	77	96.2	84.1	87	13	65-107/21
117-84-0	Di-n-octyl phthalate	4.8 U		96.2	78.4	82	96.2	92.2	96	16	62-118/24
84-66-2	Diethyl phthalate	4.8 U		96.2	69.7	72	96.2	79.8	83	14	64-108/21
131-11-3	Dimethyl phthalate	4.8 U		96.2	69.4	72	96.2	79.0	82	13	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	2.6	I	96.2	80.6	81	96.2	94.0	95	15	61-117/23
206-44-0	Fluoranthene	4.8 U		96.2	70.4	73	96.2	79.4	83	12	63-106/21
86-73-7	Fluorene	4.8 U		96.2	69.9	73	96.2	79.9	83	13	62-108/20
118-74-1	Hexachlorobenzene	4.8 U		96.2	63.7	66	96.2	72.0	75	12	63-108/22
87-68-3	Hexachlorobutadiene	4.8 U		96.2	61.9	64	96.2	69.1	72	11	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.8 U		96.2	50.7	53	96.2	57.4	60	12	39-102/29
67-72-1	Hexachloroethane	4.8 U		96.2	59.4	62	96.2	66.4	69	11	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.8 U		96.2	65.5	68	96.2	77.4	80	17	64-119/24
78-59-1	Isophorone	4.8 U		96.2	59.2	62	96.2	66.1	69	11	43-87/25
91-57-6	2-Methylnaphthalene	4.8 U		96.2	61.3	64	96.2	67.1	70	9	51-102/26
88-74-4	2-Nitroaniline	4.8 U		96.2	71.9	75	96.2	83.7	87	15	54-128/24
99-09-2	3-Nitroaniline	4.8 U		96.2	70.8	74	96.2	80.6	84	13	56-106/27
100-01-6	4-Nitroaniline	4.8 U		96.2	71.3	74	96.2	82.8	86	15	55-120/24
91-20-3	Naphthalene	4.8 U		96.2	60.6	63	96.2	67.0	70	10	47-100/29
98-95-3	Nitrobenzene	4.8 U		96.2	60.3	63	96.2	66.1	69	9	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	4.8 U		96.2	64.9	67	96.2	73.1	76	12	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.8 U		96.2	69.3	72	96.2	76.6	80	10	64-108/23
85-01-8	Phenanthrene	4.8 U		96.2	70.9	74	96.2	79.3	82	11	66-110/21
129-00-0	Pyrene	4.8 U		96.2	69.1	72	96.2	80.6	84	15	64-113/23
120-82-1	1,2,4-Trichlorobenzene	4.8 U		96.2	57.2	59	96.2	63.0	66	10	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA19516-1	Limits
367-12-4	2-Fluorophenol	45%	47%	42%	14-67%
4165-62-2	Phenol-d5	36%	37%	29%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA19534
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53740-MS	T015221.D	1	11/03/14	NJ	10/31/14	OP53740	ST713
OP53740-MSD	T015222.D	1	11/04/14	NJ	10/31/14	OP53740	ST713
FA19516-1	T015220.D	1	11/03/14	NJ	10/31/14	OP53740	ST713

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA19534-20

CAS No.	Surrogate Recoveries	MS	MSD	FA19516-1	Limits
118-79-6	2,4,6-Tribromophenol	71%	82%	89%	33-118%
4165-60-0	Nitrobenzene-d5	62%	68%	82%	42-108%
321-60-8	2-Fluorobiphenyl	68%	74%	82%	40-106%
1718-51-0	Terphenyl-d14	77%	89%	95%	39-121%

* = 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: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/03/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.013	<0.50

Associated samples MP28152: FA19534-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/03/14 11/03/14

Metal	FA19516-1 Original	DUP	RPD	QC Limits	FA19516-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.30	0.29	3.4	0-20	0.30	3.1	3	93.3	80-120

Associated samples MP28152: FA19534-20

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: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/03/14

Metal	FA19516-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.30	3.2	3	96.7	3.2	20

Associated samples MP28152: FA19534-20

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

8.1.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/03/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.8	3	93.3	80-120

Associated samples MP28152: FA19534-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/03/14

Metal	FA19516-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.295	0.00	100.0(a)	0-10

Associated samples MP28152: FA19534-20

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).

8.1.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28168
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:					11/06/14		11/06/14
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	15	15	-3.9	<200	4.4	<200
Antimony	6.0	2	2.3	0.90	<6.0	0.60	<6.0
Arsenic	10	2	2.4	-2.0	<10	-2.2	<10
Barium	200	1	1	-0.10	<200	0.60	<200
Beryllium	4.0	.5	.5	-0.10	<4.0	0.0	<4.0
Cadmium	5.0	.5	.5	-0.10	<5.0	-0.10	<5.0
Calcium	1000	50	50	18.7	<1000	43.6	<1000
Chromium	10	1	2	0.70	<10	0.50	<10
Cobalt	50	.5	.5	-0.20	<50	-0.20	<50
Copper	25	1	1	0.30	<25	-0.20	<25
Iron	300	17	17	6.0	<300	24.7	<300
Lead	5.0	1.1	1.1	0.10	<5.0	0.50	<5.0
Magnesium	5000	50	56	8.0	<5000	8.1	<5000
Manganese	15	.5	1	0.0	<15	3.2	<15
Molybdenum	50	.5	.5				
Nickel	40	.5	.5	0.20	<40	0.0	<40
Potassium	10000	200	200	-13	<10000	-20	<10000
Selenium	10	2.3	2.3	1.1	<10	1.4	<10
Silver	10	.65	.77	-0.50	<10	-0.40	<10
Sodium	10000	500	500	22.1	<10000	27.1	<10000
Strontium	10	.4	.4				
Thallium	10	1.5	2	-3.8	<10	-4.2	<10
Tin	50	.7	1				
Titanium	10	.9	1				
Vanadium	50	.5	.5	-0.20	<50	-0.10	<50
Zinc	20	3	3	0.10	<20	3.4	<20

Associated samples MP28168: FA19534-20

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: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28168
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			11/06/14					11/06/14	
Metal	FA19537-2 Original	DUP	RPD	QC Limits	FA19537-2 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	315	314	0.3	0-20	315	28000	27000	102.5	80-120
Antimony	58.1	58.2	0.2	0-20	58.1	566	500	101.6	80-120
Arsenic	59.4	58.4	1.7	0-20	59.4	2080	2000	101.0	80-120
Barium	71.6	71.8	0.3	0-20	71.6	2160	2000	104.4	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	52.2	50	104.4	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	48.7	50	97.4	80-120
Calcium	2400	2410	0.4	0-20	2400	27700	25000	101.2	80-120
Chromium	1.8	1.9	5.4	0-20	1.8	210	200	104.1	80-120
Cobalt	12.3	12.4	0.8	0-20	12.3	510	500	99.5	80-120
Copper	7.7	7.5	2.6	0-20	7.7	273	250	106.1	80-120
Iron	8150	8150	0.0	0-20	8150	34400	26000	101.0	80-120
Lead	0.0	0.0	NC	0-20	0.0	502	500	100.4	80-120
Magnesium	1010	1010	0.0	0-20	1010	25800	25000	99.2	80-120
Manganese	185	184	0.5	0-20	185	698	500	102.6	80-120
Molybdenum									
Nickel	4.5	4.6	2.2	0-20	4.5	510	500	101.1	80-120
Potassium	341000	334000(a	2.1	0-20	341000	349000(a	25000	32.0 (b)	80-120
Selenium	30.4	29.4	3.3	0-20	30.4	2030	2000	100.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	52.0	50	104.0	80-120
Sodium	186000	184000(a	1.1	0-20	186000	205000(a	25000	76.0 (b)	80-120
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	2020	2000	101.0	80-120
Tin									
Titanium									
Vanadium	6.0	5.7	5.1	0-20	6.0	490	500	96.8	80-120
Zinc	6.7	6.9	2.9	0-20	6.7	503	500	99.3	80-120

Associated samples MP28168: FA19534-20

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) Above linear range. For QC purposes only.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28168
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 11/06/14

Metal	FA19537-2 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	315	28400	27000	104.0	1.4	20
Antimony	58.1	569	500	102.2	0.5	20
Arsenic	59.4	2100	2000	102.0	1.0	20
Barium	71.6	2180	2000	105.4	0.9	20
Beryllium	0.0	52.9	50	105.8	1.3	20
Cadmium	0.0	49.1	50	98.2	0.8	20
Calcium	2400	27900	25000	102.0	0.7	20
Chromium	1.8	213	200	105.6	1.4	20
Cobalt	12.3	514	500	100.3	0.8	20
Copper	7.7	276	250	107.3	1.1	20
Iron	8150	34700	26000	102.1	0.9	20
Lead	0.0	506	500	101.2	0.8	20
Magnesium	1010	25900	25000	99.6	0.4	20
Manganese	185	707	500	104.4	1.3	20
Molybdenum						
Nickel	4.5	515	500	102.1	1.0	20
Potassium	341000	352000(a	25000	44.0 (b)	0.9	20
Selenium	30.4	2050	2000	101.0	1.0	20
Silver	0.0	52.9	50	105.8	1.7	20
Sodium	186000	204000(a	25000	72.0 (b)	0.5	20
Strontium						
Thallium	0.0	2030	2000	101.5	0.5	20
Tin						
Titanium						
Vanadium	6.0	493	500	97.4	0.6	20
Zinc	6.7	501	500	98.9	0.4	20

Associated samples MP28168: FA19534-20

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) Above linear range. For QC purposes only.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28168
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 11/06/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	27200	27000	100.7	80-120
Antimony	498	500	99.6	80-120
Arsenic	1990	2000	99.5	80-120
Barium	2070	2000	103.5	80-120
Beryllium	51.3	50	102.6	80-120
Cadmium	48.6	50	97.2	80-120
Calcium	25000	25000	100.0	80-120
Chromium	207	200	103.5	80-120
Cobalt	493	500	98.6	80-120
Copper	258	250	103.2	80-120
Iron	26200	26000	100.8	80-120
Lead	489	500	97.8	80-120
Magnesium	24600	25000	98.4	80-120
Manganese	516	500	103.2	80-120
Molybdenum				
Nickel	504	500	100.8	80-120
Potassium	26000	25000	104.0	80-120
Selenium	1960	2000	98.0	80-120
Silver	49.9	50	99.8	80-120
Sodium	26000	25000	104.0	80-120
Strontium				
Thallium	1950	2000	97.5	80-120
Tin				
Titanium				
Vanadium	479	500	95.8	80-120
Zinc	489	500	97.8	80-120

Associated samples MP28168: FA19534-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28168
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 11/06/14

Metal	FA19537-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	315	314	0.4	0-10
Antimony	58.1	57.9	0.3	0-10
Arsenic	59.4	56.5	4.9	0-10
Barium	71.6	70.6	1.4	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	2400	2400	0.0	0-10
Chromium	1.80	0.00	100.0(a)	0-10
Cobalt	12.3	11.9	3.3	0-10
Copper	7.70	8.20	6.5	0-10
Iron	8150	8110	0.5	0-10
Lead	0.00	0.00	NC	0-10
Magnesium	1010	921	9.1	0-10
Manganese	185	186	0.5	0-10
Molybdenum				
Nickel	4.50	5.40	20.0 (a)	0-10
Potassium	341000	360000	5.5	0-10
Selenium	30.4	27.5	9.5	0-10
Silver	0.00	0.00	NC	0-10
Sodium	186000	199000	6.9	0-10
Strontium				
Thallium	0.00	10.8	NC	0-10
Tin				
Titanium				
Vanadium	6.00	6.10	1.7	0-10
Zinc	6.70	34.7	417.9(a)	0-10

Associated samples MP28168: FA19534-20

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).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA19534
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP28168
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 11/06/14

Metal	Sample ml	Final ml	FA19537-2 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	9.8	10	315.2	308.896	2926	0.2	125	2500	104.7	80-120
Antimony	9.8	10	58.1	56.938	160.4	0.2	5	100	103.5	80-120
Arsenic	9.8	10	59.4	58.212	163.6	0.2	5	100	105.4	80-120
Barium	9.8	10	71.6	70.168	337.1	0.2	12.5	250	106.8	80-120
Beryllium	9.8	10			53.6	0.2	2.5	50	107.2	80-120
Cadmium	9.8	10			51	0.2	2.5	50	102.0	80-120
Calcium	9.8	10	2400	2352	7440	0.2	250	5000	101.8	80-120
Chromium	9.8	10	1.8	1.764	55.4	0.2	2.5	50	107.3	80-120
Cobalt	9.8	10	12.3	12.054	63.3	0.2	2.5	50	102.5	80-120
Copper	9.8	10	7.7	7.546	114.8	0.2	5	100	107.3	80-120
Iron	9.8	10	8150	7987	10960	0.2	150	3000	99.1	80-120
Lead	9.8	10			52.5	0.2	2.5	50	105.0	80-120
Magnesium	9.8	10	1013	992.74	5761	0.2	250	5000	95.4	80-120
Manganese	9.8	10	184.9	181.202	232.7	0.2	2.5	50	103.0	80-120
Molybdenum										
Nickel	9.8	10	4.5	4.41	108.6	0.2	5	100	104.2	80-120
Potassium	9.8	10	341200	334376	335400	0.2	500	10000	10.2*(a)	80-120
Selenium	9.8	10	30.4	29.792	130.1	0.2	5	100	100.3	80-120
Silver	9.8	10			51.2	0.2	2.5	50	102.4	80-120
Sodium	9.8	10	185700	181986	189200	0.2	500	10000	72.1*(a)	80-120
Strontium										
Thallium	9.8	10			103.6	0.2	5	100	103.6	80-120
Tin										
Titanium										
Vanadium	9.8	10	6	5.88	55.8	0.2	2.5	50	99.8	80-120
Zinc	9.8	10	6.7	6.566	265.9	0.2	12.5	250	103.7	80-120

Associated samples MP28168: FA19534-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.

2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.

3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.

4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.

5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, July 2004), *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, October 1999), and *Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services* (USEPA, July 1999). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846*), *Update III* (USEPA, June 1997) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package FA19497 were collected on October 27-28, 2014 for UTC - Delavan Spray Technologies located in Bamberg, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- Laboratory Flag: This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.

- Result Flags: These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.

- Analysis Flags: These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Total Organic Carbon by Method SM 5310B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Chloride, Nitrate, Nitrite, and Sulfate by Method 300.0/9056

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Dissolved Gases (Methane, Ethane, and Ethene) by Method RSK-175

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), June 1997. *Test Methods for Evaluating Solid Waste (SW-846), 3rd Edition, Update III.*

United States Environmental Protection Agency (USEPA), July 1999. *Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services, Revision 2.1,* EPA Region IV.

United States Environmental Protection Agency (USEPA), October 1999. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review.* Publication #EPA540/R-99/008.

United States Environmental Protection Agency (USEPA), July 2004. *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. Publication #EPA540/R-04/004.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.

2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.

3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.

4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.

5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, July 2004), *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, October 1999), and *Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services* (USEPA, July 1999). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846*), *Update III* (USEPA, June 1997) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package FA19534 were collected on October 28-29, 2014 for UTC - Delavan Spray Technologies located in Bamberg, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- Laboratory Flag: This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.

- Result Flags: These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.

- Analysis Flags: These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds and TCLP Volatile Organic Compounds by Method 8260B

Results of tetrachloroethylene in sample MW-9 were qualified "/M/m" due to recovery in the associated matrix spike sample below the established criteria of 40-160% (30%). These qualifiers indicate the results should be considered biased low.

Semivolatile Organic Compounds and TCLP Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compounds benzoic acid, 4-nitrophenol, and phenol in samples associated with preparatory batch ST713 (sample IDW) were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (8, 24, and 23%, respectively). These qualifiers indicate the non-detections are biased low and should be rejected.

Target Analyte List Metals by Methods 6010C/7470B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

With the exception of the non-detections of semivolatile organic compounds benzoic acid, 4-nitrophenol, and phenol in samples associated with preparatory batch ST713 (sample IDW), the QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the remaining data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), June 1997. *Test Methods for Evaluating Solid Waste (SW-846), 3rd Edition, Update III.*

United States Environmental Protection Agency (USEPA), July 1999. *Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services, Revision 2.1,* EPA Region IV.

United States Environmental Protection Agency (USEPA), October 1999. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review.* Publication #EPA540/R-99/008.

United States Environmental Protection Agency (USEPA), July 2004. *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. Publication #EPA540/R-04/004.